```
###########################################################
##############   File: Ubaid Test2.txt #########
###########################################################
```
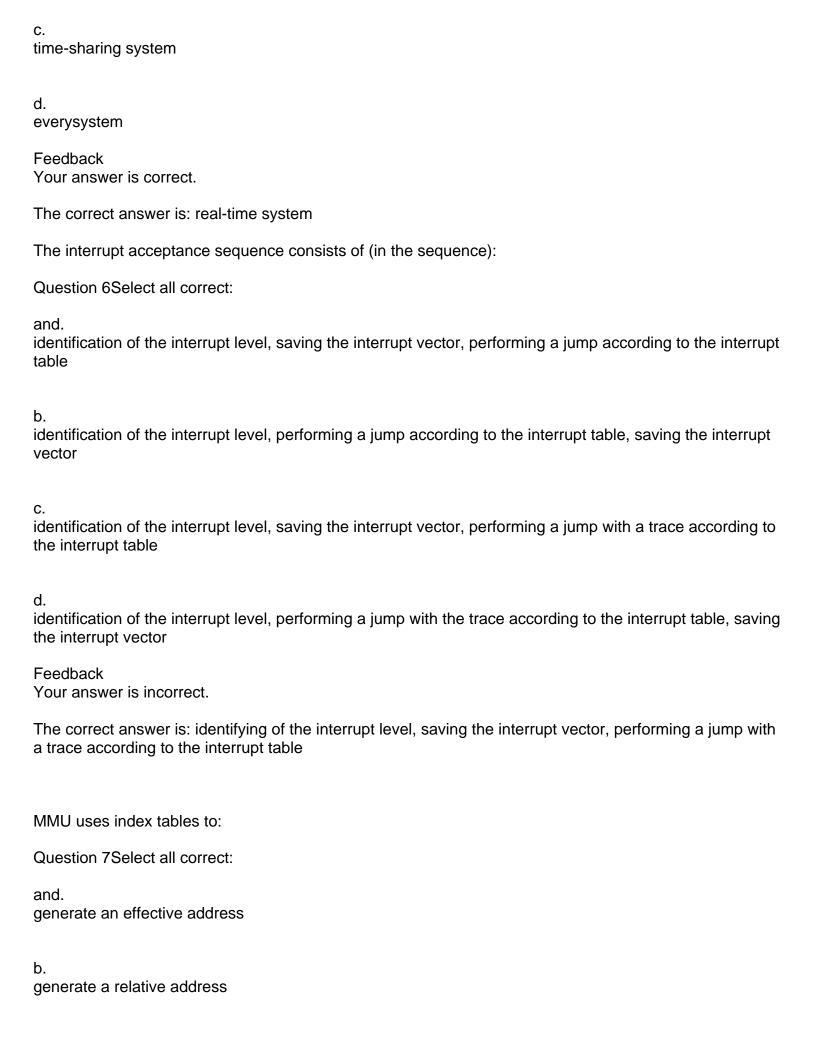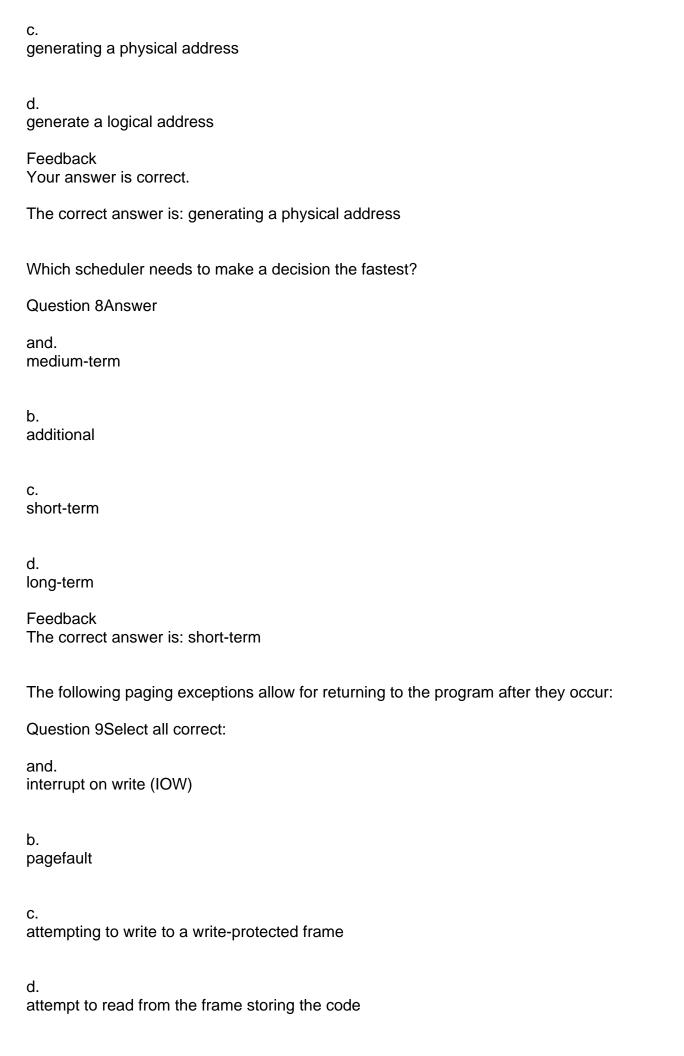Interrupt vector:

Question 1Select all correct:

and.
contains the instruction counter, condition bits, interrupt mask, and general purpose registers

b.
it is saved automatically when an interrupt is accepted

c.
contains minimal information that cannot be saved programmatically

d.
contains the ID of the process that should be restarted

Feedback
Your answer is correct.

The correct answers are: it is saved automatically when an interrupt is accepted, contains minimal information that cannot be saved programmatically

In what states can a task occur?

Question 2Select all correct:

and.
ready

b.
current

c.
blocked

d.
resetted
Feedback
Your answer is correct.

The correct answers are: current, ready, blocked

Which of the following are affected by the thrashing phenomenon?

Question 3Answer

and.
program structure

b.
mass memory

c.
primary memory

d.
program size

Feedback
The correct answer is: primary memory

The kernel is _____ user-level threads.

Question 4Answer

and.
part

b.
creator.creator

c.
aware

d.
unaware

Feedback
The correct answer is: unaware

Indulgent scheduling is the best mechanism for:

Question 5Select all correct:

and.
real-time system

b.
system with many process classes

c.
time-sharing system

d.
everysystem

Feedback
Your answer is correct.

The correct answer is: real-time system

The interrupt acceptance sequence consists of (in the sequence):

Question 6Select all correct:

and.
identification of the interrupt level, saving the interrupt vector, performing a jump according to the interrupt table

b.
identification of the interrupt level, performing a jump according to the interrupt table, saving the interrupt vector

c.
identification of the interrupt level, saving the interrupt vector, performing a jump with a trace according to the interrupt table

d.
identification of the interrupt level, performing a jump with the trace according to the interrupt table, saving the interrupt vector

Feedback
Your answer is incorrect.

The correct answer is: identifying of the interrupt level, saving the interrupt vector, performing a jump with a trace according to the interrupt table

MMU uses index tables to:

Question 7Select all correct:

and.
generate an effective address

b.
generate a relative address

c.
generating a physical address

d.
generate a logical address

Feedback
Your answer is correct.

The correct answer is: generating a physical address

Which scheduler needs to make a decision the fastest?

Question 8Answer

and.
medium-term

b.
additional

c.
short-term

d.
long-term

Feedback
The correct answer is: short-term

The following paging exceptions allow for returning to the program after they occur:

Question 9Select all correct:

and.
interrupt on write (IOW)

b.
pagefault

c.
attempting to write to a write-protected frame

d.
attempt to read from the frame storing the code

Feedback
Your answer is correct.

The correct answers are: page fault, interrupt on write (IOW)

Which of the following memory allocation schemes causes external fragmentation?

Question 10Answer

and.
Multiple contiguous fixed partitions of various sizes

b.
Multiple contiguous fixed partitions of equal size

c.
Sweeping

d.
Paging

Feedback
The correct answers are: Sweeping, Multiple contiguous fixed partitions of various sizes

Discontinuous allocation:

Question 11Select all correct:

and.
increases internal fragmentation

b.
reduces external fragmentation

c.
reduces internal fragmentation

d.
increases external fragmentation

Feedback
Your answer is incorrect.

The correct answer is: reduces external fragmentation

Round-robin scheduling is the best mechanism for:

Question 12Select all correct:

and.
system with different classes of tasks

b.
time-sharing system

c.
everysystem

d.
real-time system

Feedback
Your answer is correct.

The correct answer is: time-sharing system

In a four-level page index table, the page number is:

Question 13Select all correct:

and.
in the first level table - the leftmost in the figure

b.
in the table of the last level - the rightmost in the figure

c.
part in the table of each level

d.
none of the above answers

Feedback
Your answer is incorrect.

The correct answer is: none of the above answers

Sequence of actions when starting a new task:
1.

Answer 1 Question 14
filling in the descriptor in the kernel

2.

Answer 2 Question 14
memory allocation if this is the first task of the program

3.

Answer 3 Question 14
initialize the stack, fill the first frame

4.

Answer 4 Question 14
instruction to transfer control to the task

Feedback
Your answer is correct.

The correct answer is: 1. → filling in the descriptor in the kernel, 2. → memory allocation if this is the first task of the program, 3. → initialize the stack, fill the first frame, 4. → instruction to transfer control to the task

Paging - two-level index tables mode of operation

Question 15Select all correct:

and.
The content of the level 1 table element is concatenated (combined) with the content of the level 2 table element

b.
The content of a level 1 table element is an index in a level 2 table

c.
The content of a level 1 table element points to a level 2 table

d.
The content of a level 1 table element points to a level 2 table

Feedback
Your answer is incorrect.

The correct answer is: The content of a level 1 table element points to a level 2 table

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Answer:Question 16
thrashing
Feedback
The correct answer is: anomalies

MMU uses index tables to:

Question 17Select all correct:

and.
generate a physical address

b.
generate a relative address

c.
generate an effective address

d.
generate a logical address

Feedback
Your answer is incorrect.

The correct answer is: generate a physical address

Using the Test-And-Set instruction in synchronization:

Question 18Select all correct:

and.
Stops the processor if 0 is read

b.
Requires organizing inactive waiting in queues

c.
Requires the use of semaphores

d.
It requires processes to actively wait

Physical address:

Question 19Select all correct:

and.
points to a location in the address space of primary memory

b.
points to a cell in the process address space

c.
indicates a relative address to the segment register

d.
is contained in the address field of the instruction

What mechanism is part of batch systems?

Question 20Answer

and.
medium-tevel scheduler

b.
no scheduler is needed

c.
low-level scheduler

d.
high-level scheduler

A process always transitions from the "user" state to the "system" state as a result of:

Question 21Select all correct:

and.
Process suspension

b.
A software interrupt that calls a system function

c.
Hardware interrupt

d.
Debugger trap

What can happen when a job leaves the critical section and more than 1 task is waiting for the critical section?

Question 22Select all correct:

and.
active waiting for a critical section

b.
deadlock waiting for critical section

c.
starvation awaiting a critical section

d.
letting both tasks into the critical section

The correct answer is: starvation awaiting a critical section

In operating system:

Question 23Select all correct:

and.
the decision to handle an exception or not is made dynamically

b.
some exceptions are handled, some not

c.
timer interrupt may not be handled

d.
every exception must be handled

Feedback
Your answer is correct.

The correct answer is: every exception must be handled

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception is raised in system mode?

Question 24Select all correct:

and.
initializes the kernel system stack from the scratch

b.
switches to the next kernel system stack

c.
nothing special, it builds the context on the kernel system stack

d.
switches back to the application program stack

Feedback
Your answer is correct.

The correct answer is: nothing special, it builds the context on the kernel system stack

The direct resume rule means that:

Question 25Select all correct:

and.
The resuming process loses the critical region

b.
The resuming process applies for the critical region just like other processes waiting to enter the critical region

c.
The summing process gets a critical region after the resumed process exits the critical region

Feedback
Your answer is correct.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just like other processes waiting to enter the critical region

Is memory protection useless on a single-user system?

Question 26Answer
True
Falsehood
Feedback
The correct answer is "False".

The effective address is also:

Question 27Select all correct:

and.
Absolute address

b.
Physical address

c.
Logicaladdress

d.
Indirect address

The Test-And-Set or Compare-And-Swap instruction has the following characteristics:

Question 28Select all correct:

and.
Requires active waiting from tasks

b.
It is possible to use only on computers with common memory

c.
It is possible to deadlock with TAS/CAS operations on multiple variables

d.
It is possible to use only in 1-processor systems

A single-program system is one that, in principle :

Question 29Select all correct:

and.
Doesn't allow you to delete the program from memory (uses non-volatile memory)

b.
Requires static relocation

c.
Runs on a uniprocessor computer

d.
Allows for storing only one program in primary memory

Feedback
Your answer is correct.

The correct answer is: Allows for storing only one program in primary memory

What is this technique where the operating system gathers programs and data together before processing?

Question 30Answer

and.
Batch processing

b.
Real-time processing

c.
Interactive processing

d.
Distributed processing

Feedback
The correct answer is: Batch processing

The system stack must provide space for:

Question 31Select all correct:

and.
Processor registers in as many copies as there are interrupt lines +1

b.
Processor registers in as many copies as there are devices in the system +1

c.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

d.

CPU registers

System/user threads:

Question 32Select all correct:

and.
System level thread descriptors are stored in the operating system kernel.

b.
User-level threads share the same stack.

c.
User-level threads share the same execution context.

By definition , a deadlock is a situation where:

Question 33Select all correct:

and.
any greater than zero number of processes are waiting for conditions that cannot be met

b.
at least two processes are waiting for conditions that cannot be met

c.
any greater than one number of processes are waiting for conditions that cannot be met

d.
exactly one process is waiting for a condition that cannot be met

be met

Allocation unit for file storage:

Question 34Answer

and.
it should be selected to match the characteristics of the data

b.
may differ between files in a partition

c.
may be a variable in a partition

d.
may vary between partitions

Feedback
The correct answer is: may vary between partitions

The common allocation queue to fixed blocks of memory of different sizes causes:

Question 35Select all correct:

and.
internal fragmentation

b.
external fragmentation

c.
need for compaction

Feedback
Your answer is correct.

The correct answers are: internal fragmentation, external fragmentation
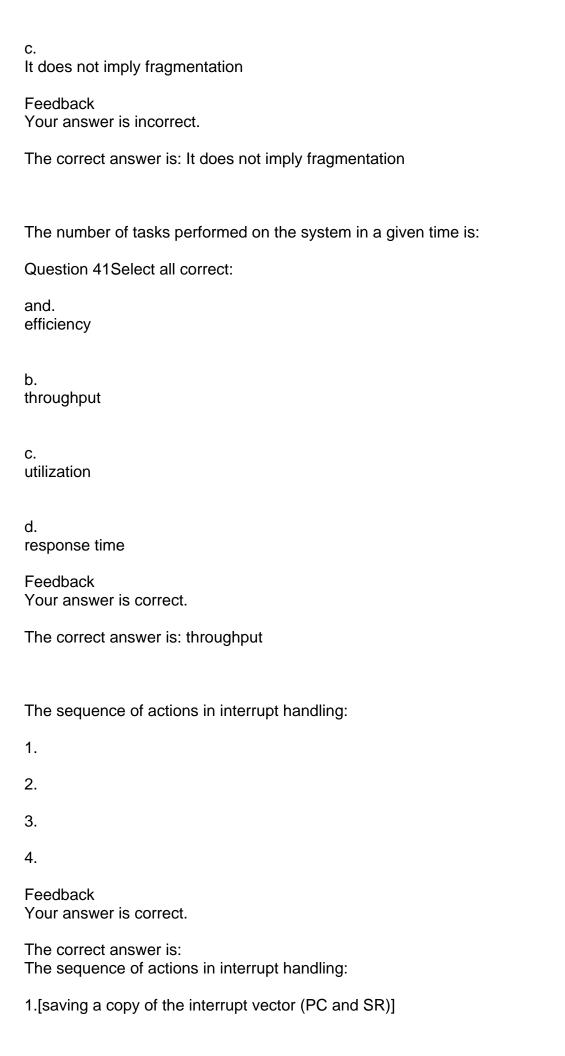
Consider the following sequence of address references:

123, 215, 600, 1234, 76, 96.

If the page size is 100, the order of page references is as follows:

Question 36Answer

and.
0,2,6,12,0,0

b.
12,21,60,123,7,9

c.
1,2,6,12,0,0

d.
1,2,6,12

Feedback
The correct answer is: 1,2,6,12,0,0

In UNIX, access rights are attributes:

Question 37Select all correct:

and.
A directory entry for a file

b.
A special table specifying access rights

c.
User descriptor

d.
An entry in the I-node table

Feedback
Your answer is incorrect.

The correct answer is: An entry in the I-node table

In the four-level page index table, the frame number is:

Question 38Select all correct:

and.
part in the table of each level

b.
in the table of the last level - the rightmost in the figure

c.
in the first level table - the leftmost in the figure

d.
none of the above answers

Which of the following few common services can be partially provided by software other than the operating system?

Question 39Answer

and.
Running programs

b.
I/O operations

c.
Security and protection

d.
Manipulating the file system

Feedback
The correct answers are: Security and protection, Manipulating the file system

Memory partitioning into blocks of any size:

Question 40Select all correct:

and.
It implies external fragmentation

b.
It implies internal fragmentation

c.
It does not imply fragmentation

Feedback
Your answer is incorrect.

The correct answer is: It does not imply fragmentation

The number of tasks performed on the system in a given time is:

Question 41Select all correct:

and.
efficiency

b.
throughput

c.
utilization

d.
response time

Feedback
Your answer is correct.

The correct answer is: throughput

The sequence of actions in interrupt handling:

1.

2.

3.

4.

Feedback
Your answer is correct.

The correct answer is:
The sequence of actions in interrupt handling:

1.[saving a copy of the interrupt vector (PC and SR)]

2.[switching to system mode (modification of PC and status register)]

3.[programmatic context saving]

4. [switching to the system stack]

Scheduling disk access involves deciding on the following:

Question 43Answer

and.
the order in which disk access requests should be handled

b.
about the type of disks the system should have

c.
which drive should be used next

d.
about the physical location of the files

Feedback
The correct answer is: the order in which disk access requests should be handled

Which of the following information is stored on task switching?

Question 44Answer

and.
scheduler data

b.
I/O status information

c.
Contents of general purpose registers, program counter, and similar registers available to the program

d.
Contents of datum, limit and other registers inaccessible to the program

Feedback
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the program, Contents of general purpose registers, program counter, and similar registers available to the program

The hardware resources of a computer system are:

Question 45Select all correct:

and.
Virtual memory

b.
Windows on the screen

c.
Processor time

d.
Peripheral devioces

Feedback
Your answer is correct.

The correct answers are: Processor time , Peripheral devioces

Address translation is handled by a unit called (give the abbreviation):

Answer:Question 46
MMU
Feedback
The correct answer is: MMU

At the suspended state is a process that:

Question 47Select all correct:

and.
waits for an I/O operation to complete

b.
waits for a processor

c.
fills the processor idle time

d.
occupations and processor

Address translation mechanism:

Question 48Select all correct:

and.
adds the frame number to the page number

b.
concatenates the frame number and page number

c.
concatenates the frame number and offset on the page

d.
concatenates the page number and page offset

Address translation aims to:

Question 49Select all correct:

and.
detecting the phenomenon of locality of references

b.
converting a physical address to a virtual one

c.
Generating a "frame error" interrupt when the page is out of memory

d.
converting a virtual address to a physical one

The correct answer is: converting a virtual address to a physical one

In the "current" state, there is a process that:

Question 50Select all correct:

and.
waits for a processor

b.
fills the CPU idle time

c.
waits for an I/O operation to complete

d.
occupations and processor

The correct answer is: occupies a processor

In a FAT-based disk system, file size is directly limited by:

Question 51Select all correct:

and.
FAT table size

b.
Allocation unit size

c.
The number of bits of the field describing the size of the file

d.
The number of bits of the disk address

e.
The size of the disk space

On UNIX, the number of files is directly limited by:

Question 52Select all correct:

and.
FAT size

b.
The number of bits of the disk address

c.
Allocation unit size

d.
The number of bits of the field describing the size of the file

e.
The size of the space allocated for files

The program supervisor layer in the operating system has the following role:

Question 53Select all correct:

and.
Intercepts all program system calls and routes them to the appropriate layers

b.

Deals with the management of primary memory (memory allocation to programs)

c.
Runs programs

d.
Deals with buffering data written and read from mass memory

Feedback
Your answer is partially correct.

You chose correctly: 2.
The correct answers are: Intercepts all program system calls and routes them to the appropriate layers ,
Runs programs, Deals with the management of primary memory (memory allocation to programs)

The multi-level interrupt controller includes :

Question 54Select all correct:

and.
Individual interrupt mask

b.
Priority encoder

c.
The register of interrupt being serviced

d.
Collective interrupt mask

Feedback
Your answer is correct.

The correct answers are: Collective interrupt mask , Individual interrupt mask , Priority encoder

A concurrent system is one that, in principle :

Question 55Select all correct:

and.
It allows multiple programs/processes/threads to run physically simultaneously

b.
Requires the use of timer interrupts

c.
Allows multiple programs/processes/threads to run simultaneously or seemingly simultaneously

d.
It runs on a multiprocessor computer

Feedback
Your answer is incorrect.

The correct answer is: Allows multiple programs/processes/threads to run simultaneously or seemingly simultaneously

Address translation aims to:

Question 56Select all correct:

and.
Converting a virtual address to a physical one

b.
Detecting the phenomenon of locality of references

c.
Converting a physical address to a virtual one

d.
Generating a "frame error" interrupt when the page is out of memory

Feedback
Your answer is incorrect.

The correct answer is: Converting a virtual address to a physical one

Which swapping algorithms use the history of page references (when was it last used or in which time slices was it used)?

Question 57Select all correct:

and.
working set

b.

LRU

c.
clock

d.
LFU

e.
second chance

f.
no algorithm

g.
NRU

h.
FIFO

Feedback
Your answer is incorrect.

The correct answers are: second chance, LRU, LFU, working set

If the loader inserts a program with absolute addresses into a fixed address space, it is called:

Question 58Answer

and.
Dynamic loading

b.
Static relocation

c.
Static loading

d.
Dynamic relocation

Feedback
The correct answer is: Dynamic relocation

Static relocation is performed by:

Question 59Answer

and.
Loader

b.
Linker

c.
Paging system

d.
Special registers (DATUM)

Feedback
The correct answers are: Linker, Loader

What is a scheduler?

Question 60Select all correct:

and.
the system process that allocates the processor

b.
memory allocation procedure

c.
procedure that schedules frame release in the page replace algorithm

d.
a kernel routine that selects a task to execute

Feedback
Your answer is correct.

The correct answer is: a kernel routine that selects a task to execute

What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 3 processors

task

1

2

3

4

processing time

3.2

6.2

2.7

1.6

Answer:Question 61
3.82
Feedback
The correct answer is: 3.8

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.::

the beginning of strip 0,1,2,3 looks like this:

0

1

0

0

1
Parity disk

1

1

1

1

1

Disk 3

1

0

1

1

0

Disk 2

1

0

1

0

1

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values   are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.

Disk 3 has been corrupted and always reads 1. After replacing the disk with a new one, what values
  should be put in the strip on disk 3?

Answer:Question 62
1, 1, 0, 1
Feedback
The correct answer is: 11001

Assuming memory cells are 1-byte, the page number in the address field is 12 bits, the offset is 12 bits, the frame number is 10 bits, and all entries in the TIS page index table are on a 16-bit word boundary, enter:

- the maximum size of the program's virtual memory in MB

Answer:Question 63
16
Feedback
The correct answer is: 2
###

###
##############   File: Example 1.txt #########
###

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1
Correct
Points: 1.00 out of 1.00
Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%
%%%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2
Correct
Points: 1.00 out of 1.00
What are the functions of the kernel?
a. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3
Correct
Points: 1.00 out of 1.00
The root directory of the disk should be located:

a. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4
Correct
Points: 1.00 out of 1.00
Virtual memory consists of:
Select all correct:
a. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answer is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie
Punkty: 0,00 z 1,00
The page fault interrupt is used to:
Wybierz wszystkie poprawne:
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answer is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Wybierz wszystkie poprawne:
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Wybierz wszystkie poprawne:
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie
Punkty: 0,00 z 1,00
Which mechanisms are supported by the phenomenon of locality of references?
Wybierz wszystkie poprawne:
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answer is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Wybierz wszystkie poprawne:
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answer is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Wybierz wszystkie poprawne:
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie

Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Wybierz wszystkie poprawne:
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Wybierz wszystkie poprawne:
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Wybierz wszystkie poprawne:
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie
Punkty: 0,00 z 1,00
Page thrashing is a phenomenon involving:
Wybierz wszystkie poprawne:
a.

frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answer is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answer is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie
Punkty: 0,00 z 1,00
Dynamic relocation:
Wybierz wszystkie poprawne:
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Wybierz wszystkie poprawne:
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number

d. frame number
Twoja odpowiedź jest poprawna.
The correct answer is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Wybierz wszystkie poprawne:
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Wybierz wszystkie poprawne:
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie
Punkty: 0,00 z 1,00
Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answer is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Wybierz wszystkie poprawne:
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 24
Niepoprawnie
Punkty: 0,00 z 1,00
The resources of the computer system are:
Wybierz wszystkie poprawne:
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Wybierz wszystkie poprawne:
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answer is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and

what happens when an exception
is raised in system mode?
Wybierz wszystkie poprawne:
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answer is: nothing special, it builds the context on the kernel system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie
Punkty: 0,00 z 1,00
Opening a file in UNIX writes the following entries in the operating system's data structures:
Wybierz wszystkie poprawne:
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter
in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Wybierz wszystkie poprawne:
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):

Wybierz wszystkie poprawne:
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answer is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Wybierz wszystkie poprawne:
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie
Punkty: 0,00 z 1,00
a page fault interrupt occurs when:
Wybierz wszystkie poprawne:
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory

Twoja odpowiedź jest niepoprawna.
The correct answer is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie
Punkty: 0,00 z 1,00
Fragmentation is implied by:
Wybierz wszystkie poprawne:
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Wybierz wszystkie poprawne:
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.

task sheduling
d. task timetable management
The correct answer is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Wybierz wszystkie poprawne:
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answer is: blocked

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Wybierz wszystkie poprawne:
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answer is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answer is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 39
Niepoprawnie
Punkty: 0,00 z 1,00
In which swapping algorithms is it necessary to clear the M bits individually?
Wybierz wszystkie poprawne:

a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answer is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie
Punkty: 0,00 z 1,00
In a FAT-based disk system, file size is directly limited by:
Wybierz wszystkie poprawne:

a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

20/32

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie
Punkty: 0,00 z 1,00
In which swapping algorithms is it necessary to collectively clear the bits R?
Wybierz wszystkie poprawne:

a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU

f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie
Punkty: 0,00 z 1,00
In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Wybierz wszystkie poprawne:
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Wybierz wszystkie poprawne:
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answer is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue

The correct answer is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answer is: Kernel-level threads require their descriptors in the kernel.

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie
Punkty: 0,00 z 1,00
Which swapping algorithms use the last reference time?
Wybierz wszystkie poprawne:
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Wybierz wszystkie poprawne:
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answer is: ready

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 48
Niepoprawnie
Punkty: 0,00 z 1,00
What type of code can be executed simultaneously on multiple processors?
Wybierz wszystkie poprawne:
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answer is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Wybierz wszystkie poprawne:
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answer is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Wybierz wszystkie poprawne:
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.

address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answer is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Wybierz wszystkie poprawne:
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answer is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Wybierz wszystkie poprawne:
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Wybierz wszystkie poprawne:
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing

an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie
Punkty: 0,00 z 1,00
The common allocation queue to fixed blocks of memory of equal size causes:
Wybierz wszystkie poprawne:
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answer is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie
Punkty: 0,00 z 1,00
MMU uses index tables to:
Wybierz wszystkie poprawne:
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answer is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie
Punkty: 0,00 z 1,00
The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answer is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Wybierz wszystkie poprawne:
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page

d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answer is: Concatenates the frame number and offset on the page

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answer is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie
Punkty: 0,00 z 1,00
What type of code can multiple processes execute simultaneously?
Wybierz wszystkie poprawne:
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answer is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answer is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

###

###
############### File: .~lock.Document.rtf# #########
###
,mafzal,mafzal,23.06.2024 02:50,file:///home/mafzal/.config/libreoffice/4;
###

###
############### File: AtharTEst2.txt #########
###
Is memory protection useless on a single-user system?

Question 1Answer
True
False
Feedback

The correct answer is 'False'.
Question 2
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
Dynamic relocation is performed by:

Question 2Answer

a.
Special registers (DATUM)

b.
Paging system

c.
Loader

d.
Linker

Feedback
The correct answers are: Special registers (DATUM), Paging system
Question 3
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
A single-program system is one that, in principle:

Question 3Select one or more:

a.
Allows for storing only one program in primary memory

b.
Runs on a uniprocessor computer

c.
Needs relocation

d.
Allows for storing only one program in mass memory

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Allows for storing only one program in primary memory

Question 4
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
In a FAT-based disk system, file size is directly limited by:

Question 4Select one or more:

a.
The number of bits of the disk address

b.
The size of the disk space

c.
The number of bits of the field describing the size of the file

d.
Allocation unit size

e.
FAT table size

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file
Question 5
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Calling the program with the "exec" operation results in (accurately to the result of the exec operation):

Question 5Select one or more:

a.
Loading a code segment from disk, duplicating data segments and the calling process stack

b.
Loading code and data segments from disk, initializing a new stack segment

c.
Loading a code segment from disk, duplicating the data segment of the calling process

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: Loading code and data segments from disk, initializing a new stack segment
Question 6
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Twins algorithm:

Question 6Select one or more:

a.
Causes external fragmentation

b.
Causes less fragmentation than static division into equal blocks

c.
Causes internal fragmentation

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Causes internal fragmentation, Causes external fragmentation, Causes less fragmentation than static division into equal blocks
Question 7
Correct
Mark 1.00 out of 1.00
Flag question
Question text
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception is raised in system mode?

Question 7Select one or more:

a.
nothing special, it builds the context on the kernel system stack

b.
switches to the next kernel system stack

c.
initializes the kernel system stack from the scratch

d.
switches back to the application program stack

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: nothing special, it builds the context on the kernel system stack
Question 8
Correct
Mark 1.00 out of 1.00
Flag question
Question text
When starting a program, how is control passed to it from the operating system?

Question 8Select one or more:

a.
extracode

b.
return from interrupt handler IRET

c.
jump with trace

d.
jump

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: return from interrupt handler IRET
Question 9
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The return from interrupt instruction:

Question 9Select one or more:

a.
always jumps to the process that was interrupted

b.
restores the stack pointer

c.
restores the interrupt vector

d.
restores general purpose registers

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: restores the interrupt vector
Question 10
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The multi-level interrupt controller includes:

Question 10Select one or more:

a.
Priority encoder

b.
Individual interrupt mask

c.
Collective interrupt mask

d.
The register of interrupt being serviced

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Collective interrupt mask, Individual interrupt mask, Priority encoder
Question 11
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
In which swapping algorithms is it necessary to clear the R bits individually?

Question 11Select one or more:

a.
clock

b.
working set

c.
optimal

d.
no algorithm

e.
second chance

f.
LFU

g.
FIFO

h.
LRU

i.
NRU

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: second chance, working set,
clock

Question 12
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Which scheduler needs to make a decision the fastest?

Question 12Answer

a.
additional

b.
medium-term

c.
short-term

d.
long-term

Feedback
The correct answer is: short-term
Question 13
Incorrect

Mark 0.00 out of 1.00
Flag question
Question text
Opening a file in UNIX writes the following entries in the operating system's data structures:

Question 13Select one or more:

a.
Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

b.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

c.
Inserting a new item into the Table of Open Files of the Process

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry, Inserting a new item into the Table of Open Files of the Process
Question 14
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Connection with segmentation consists in:

Question 14Select one or more:

a.
Dividing pages into segments

b.
Generating a "frame error" interrupt when the frame containing the page does not belong to the current segment

c.
Identifying segments with pages

d.
The use of a segment table or pool of segment registers treated as an additional, superior level of paging

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: The use of a segment table or pool of segment registers treated as an additional, superior level of paging

Question 15
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Scheduling disk access involves deciding on the following:

Question 15Answer

a.
the order in which disk access requests should be handled

b.
about the type of disks the system should have

c.
about the physical location of the files

d.
which drive should be used next

Feedback
The correct answer is: the order in which disk access requests should be handled
Question 16
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The following paging exceptions allow for returning to the program after they occur:

Question 16Select one or more:

a.
page fault

b.
attempting to write to a write-protected frame

c.
attempt to read from the frame storing the code

d.
interrupt on write (IOW)

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: page fault, interrupt on write (IOW)
Question 17

Partially correct
Mark 0.75 out of 1.00
Flag question
Question text
Which mechanisms are supported by the phenomenon of locality of references?

Question 17Select one or more:

a.
page swapping

b.
reverse page index tables

c.
address translation

d.
associative memory of page references

e.
multilevel page index tables

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 3.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page references
Question 18
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The page reference and modification bits are used to:

Question 18Select one or more:

a.
Indication whether the frame is empty or contains a page

b.
Counting references to optimize exchanges

c.
Detection of locality of references

d.

Address translation support

The correct answer is: Counting references to optimize exchanges
Question 19
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
External fragmentation can be avoided by:

Question 19Select one or more:

a.
Application of the onion algorithm

b.
Freeing memory blocks in the reverse order to allocation

c.
Allocation of fixed size static memory blocks

d.
Freeing memory blocks in allocation order

You have correctly selected 1.
The correct answers are: Allocation of fixed size static memory blocks, Freeing memory blocks in the reverse order to allocation
Question 20
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The number of tasks performed on the system in a given time is:

Question 20Select one or more:

a.
efficiency

b.
response time

c.
utilization

d.

throughput

The correct answer is: throughput
Question 21
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The segment descriptor table contains:

Question 21Select one or more:

a.

address of the segment page index table of the top-level (first level) in the hierarchy

b.

addresses of all segment page index tables

c.

address of the segment page index table of the bottom-level (last level) in the hierarchy

The correct answer is: address of the segment page index table of the top-level (first level) in the hierarchy
Question 22
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Using the Test-And-Set instruction in synchronization:

Question 22Select one or more:

a.

Stops the processor if 0 is read

b.

It requires processes to actively wait

c.

Requires organizing inactive waiting in queues

d.
Requires an explicit relinquishment of the processor to another process

Question 23
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What mechanism is part of batch systems?

Question 23Answer

a.
medium-term scheduler

b.
no scheduler is needed

c.
short-term scheduler

d.
long-term scheduler

Question 24
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The conversion of the effective address to the physical one takes place:

Question 24Select one or more:

a.
in the bus arbiter

b.
in the memory management unit

c.
in the sequencer

d.

in the arithmetic-logic unit

The correct answer is: in the memory management unit
Question 25
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The system stack must provide space for:

Question 25Select one or more:

a.
Processor registers in as many copies as there are interrupt lines +1

b.
CPU registers

c.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

d.
Processor registers in as many copies as there are devices in the system +1

The correct answer is: Processor registers in as many copies as there are interrupt lines +1
Question 26
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The following situations trigger "error" exceptions:

Question 26Select one or more:

a.
attempting to execute in user mode an instruction that is only legal in system mode

b.
extracode

c.
attempting to execute an illegal instruction

d.
page fault (also known as frame fault, frame error, page miss)

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: attempting to execute an illegal instruction, attempting to execute in user mode an instruction that is only legal in system mode
Question 27
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
What does the file system layer do?

Question 27Answer

a.
Manages relationships between files

b.
Manages files

c.
Manages remote file systems

d.
Manages remote files

Feedback
The correct answer is: Manages files
Question 28
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The root directory of the disk should be located:

Question 28Answer

a.
at a fixed address in main memory

b.
in a place designated by the data structure in a fixed location on the disk

c.
in a permanent place on the disk

d.

in a place hard-coded in the structures of the operating system

Question 29
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Scheduler function is:

Question 29Answer

a.

counting the CPU time used by tasks

b.

changing task priorities

c.

selecting a task to run

d.

scheduling tasks on the processor

Question 30
Correct
Mark 1.00 out of 1.00
Flag question
Question text
System/user threads:

Question 30Select one or more:

a.

User-level threads share the same execution context.

b.

System level thread descriptors are stored in the program address space.

c.

User-level threads share the same stack.

Question 31
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Twice consecutive execution in one process of operation P on a raised binary semaphore:

Question 31Select one or more:

a.
It doesn't change anything

b.
Decreases semaphore value by 2

c.
Causes the semaphore to get down

d.
If a semaphore guards a critical region, it leads to a deadlock

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: If a semaphore guards a critical region, it leads to a deadlock, Causes the semaphore to get down
Question 32
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Static relocation is performed by:

Question 32Answer

a.
Special registers (DATUM)

b.
Linker

c.
Paging system

d.
Segment descriptors

Feedback
The correct answer is: Linker

Question 33
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
How does the operating system call the task completion subroutine?

1.

Answer 1 Question 33
sets the trace in the terminating subroutine to the current position

3.

Answer 2 Question 33
builds the frame of the terminating subroutine on the task stack

2.

Answer 3 Question 33
recreates the context programmatically and executes the IRET instruction

4.

Answer 4 Question 33
builds an interrupt vector on the system stack pointing to the terminating subroutine code

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: 1. → builds the frame of the terminating subroutine on the task stack, 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code, 2. → sets the trace in the terminating subroutine to the current position, 4. → recreates the context programmatically and executes the IRET instruction

Question 34
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Frame access bits (reference and modification):

Question 34Select one or more:

a.
must be readable

b.
must be group readable

c.
must be available for writing

d.
must be available for group clear

Question 35
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Which of the following statements applies to the process?

Question 35Answer

a.
The execution of the process must proceed in a sequential manner.

b.
A process is code and data loaded into main memory.

c.
A process is defined as a set of resources needed to run a program.

d.
A process is a running program.

Feedback
The correct answers are: A process is a running program., The execution of the process must proceed in a sequential manner., A process is defined as a set of resources needed to run a program.
Question 36
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The relocating loader generates addresses as the program is loaded into primary memory. These addresses are:

Question 36Answer

a.
Symbolic

b.
Absolute

c.
Indirect

d.
Relative

Question 37
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The kernel is _____ user-level threads.

Question 37Answer

a.
aware

b.
unaware

c.
creator

d.
part

Question 38
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What type of code can multiple processes execute simultaneously?

Question 38Select one or more:

a.
self-modifying

b.
dynamically relocated

c.
reentrant

d.
binary

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: reentrant
Question 39
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What mechanism is used to desynchronize processes with different relative speeds?

Question 39Select one or more:

a.
buffer

b.
preempting

c.
interrupts

d.
scheduling

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: buffer
Question 40
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Semaphores are used to solve the problem:

Question 40Answer

a.
process scheduling

b.
races

c.
Belady problem

d.

mutual exclusion

Question 41
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Converting the effective address to physical is performed in:

Question 41Select one or more:

a.
sequencer

b.
arithmetic-logic unit

c.
memory management unit

d.
bus arbiter

Question 42
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The following situations cause "error" exceptions (processor internal interrupts)

Question 42Select one or more:

a.
instruction legal but prohibited in user mode

b.
extracode

c.
illegal instruction

The correct answers are: illegal instruction, instruction legal but prohibited in user mode
Question 43
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The internal state of the program supervisor layer is available for:

Question 43Answer

a.
OS kernel

b.
Applications

c.
File system layer

d.
User programs

Feedback
The correct answer is: OS kernel
Question 44
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What can happen when a job leaves the critical section and more than 1 task is waiting for the critical section?

Question 44Select one or more:

a.
deadlock waiting for critical section

b.
letting both tasks into the critical section

c.
active waiting for a critical section

d.
starvation awaiting a critical section

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: starvation awaiting a critical section
Question 45
Correct
Mark 1.00 out of 1.00
Flag question
Question text
In what states can a task occur?

Question 45Select one or more:

a.
resetted

b.
ready

c.
current

d.
blocked
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: current, ready, blocked
Question 46
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The result of cooperation of concurrent processes:

Question 46Select one or more:

a.
it may depend on how processes are scheduled

b.
it is always deterministic

c.
it can be non-deterministic
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: it may depend on how processes are scheduled, it can be non-deterministic
Question 47
Partially correct
Mark 0.67 out of 1.00
Flag question
Question text

What is true about system level threads?

Question 47Answer

a.
All process threads share the same address space.

b.
All process threads can share the same set of open files.

c.
All process threads can share the same set of child processes.

d.
Thread switching does not require interaction with the operating system.

Feedback
The correct answers are: All process threads can share the same set of open files., All process threads share the same address space., All process threads can share the same set of child processes.
Question 48
Correct
Mark 1.00 out of 1.00
Flag question
Question text
A typical collection of program segments includes (come of them can be combined):

Question 48Select one or more:

a.
stack segment

b.
data segment

c.
Code segment

d.
page index tables segment

e.
processor registers segment

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Code segment, data segment, stack segment
Question 49
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The algorithm in which the most recently used page is swapped out is called (enter the abbreviation if applicable):

Answer: Question 49
MRU (Most Recently Used) algorithm
Feedback
The correct answer is: LRU
Question 50
Correct
Mark 1.00 out of 1.00
Flag question
Question text
MMU uses index tables to:

Question 50Select one or more:

a.
generating a physical address

b.
generate a relative address

c.
generate a logical address

d.
generate an effective address

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: generating a physical address
Question 51
Correct
Mark 1.00 out of 1.00
Flag question
Question text
A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Question 51Select one or more:

a.
paging

b.
fragmentation

c.
mapping

d.
swapping

Question 52
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What mechanism is part of time-sharing systems?

Question 52Answer

a.
high-level scheduler

b.
swapping

c.
low-level scheduler

d.
medium-level scheduler

Question 53
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Effective address is:

Question 53Select one or more:

a.
logical address

b.

indirect address

c.
relative address

d.
physical address

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: logical address
Question 54
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
WORST-FIT algorithm:

Question 54Select one or more:

a.
It allows for fast determining whether there is a free block of the required size

b.
It is designed to reduce external fragmentation

c.
Requires a descending sort of the list of free blocks

d.
Requires sorting the cut part into the list of free blocks

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answers are: Requires a descending sort of the list of free blocks, It allows for fast determining whether there is a free block of the required size, It is designed to reduce external fragmentation, Requires sorting the cut part into the list of free blocks
Question 55
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Collective interrupt mask is:

Question 55Select one or more:

a.
register in which the address of the interrupt controller is stored

b.
a combinational circuit that calculates the number of the interrupt received

c.
a register that blocks or unblocks all interrupts

d.
a register that blocks or unlocks a non-maskable interrupt

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: a register that blocks or unblocks all interrupts
Question 56
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Which swapping algorithms use page reference history?

Question 56Select one or more:

a.
working set

b.
NRU

c.
FIFO

d.
second chance

e.
working set clock

f.
LRU

g.
LFU

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: LRU, LFU
Question 57
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
Static relocation is performed by:

Question 57Answer

a.
Linker

b.
Loader

c.
Paging system

d.
Special registers (DATUM)

Feedback
The correct answers are: Linker, Loader
Question 58
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The direct resume rule means that:

Question 58Select one or more:

a.
The resuming process loses the critical region

b.
The resuming process gets a critical region after the resumed process exits the critical region

c.
The resuming process applies for the critical region just like other processes waiting to enter the critical region

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: The resuming process loses the critical region, The resuming process applies

for the critical region just like other processes waiting to enter the critical region
Question 59
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Belady anomaly occurs in:

Question 59Answer

a.
LIFO

b.
LRU

c.
FIFO

d.
NRU

Feedback
The correct answer is: FIFO
Question 60
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
A multiprogram system is one that, in principle:

Question 60Select one or more:

a.
Allows for running more than one program at the same time

b.
Allows for storing multiple programs in mass memory

c.
It allows for storing many programs in the main memory

d.
Allows for running programs only one after another

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: It allows for storing many programs in the main memory

Question 61
Correct
Mark 5.00 out of 5.00
Flag question
Question text
What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 3 processors

task

1

2

3

4

processing time

3.6

6

2.6

1.3

Answer:Question 61
3.7
Feedback
The correct answer is: 3.7

Question 62
Correct
Mark 5.00 out of 5.00
Flag question
Question text

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:

1

1

1

0

0

Parity disk

0

0

0

0

0

Disk 3

1

0

0

1

0

Disk 2

1

0

1

1

0

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 even.

Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?

Answer:Question 62
1 0 1 0 0
Feedback
The correct answer is: 10100
Question 63
Incorrect
Mark 0.00 out of 5.00
Flag question
Question text
Assuming memory cells are 1-byte, the page number in the address field is 12 bits, the offset is 12 bits, the frame number is 10 bits, and all entries in the TIS page index table are on a 16-bit word boundary, enter:

- the maximum size of the program's virtual memory in MB

Answer:Question 63
16
Feedback
The correct answer is: 4
###

###
############## File: AfzalTest2.txt #########
###
Question 1Select one or more:

The root directory of the disk should be located:

Question 1Answer

a.
in a place hard-coded in the structures of the operating system

b.
in a place designated by the data structure in a fixed location on the disk

c.
at a fixed address in main memory

d.
in a permanent place on the disk

Feedback
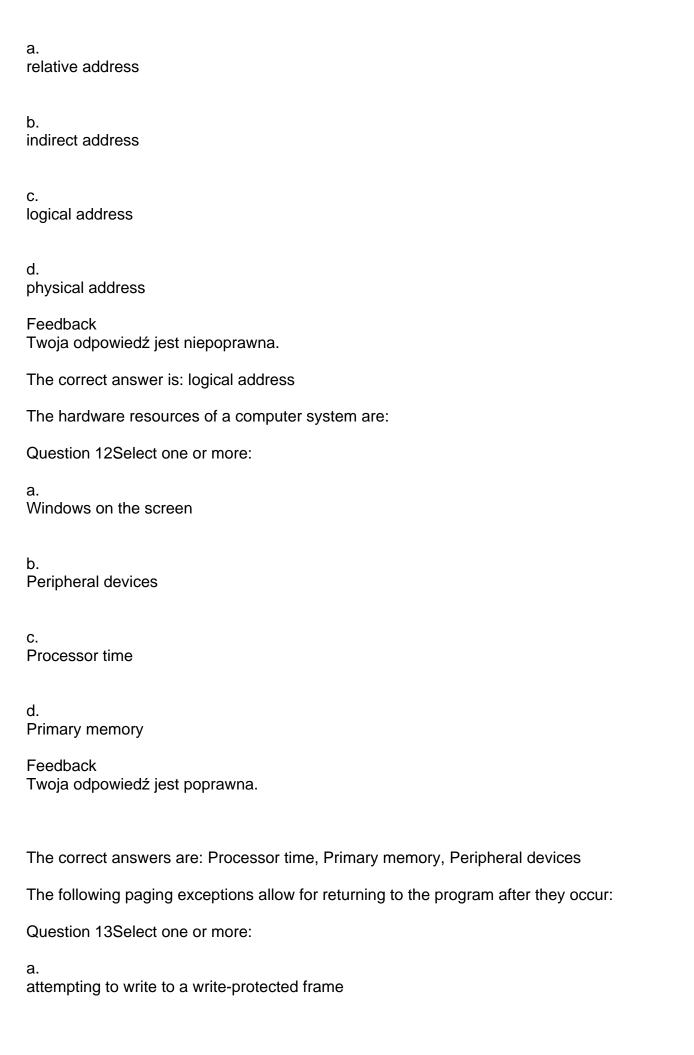The correct answer is: in a place designated by the data structure in a fixed location on the disk

Twins algorithm:

Question 2Select one or more:

a.
Causes external fragmentation

b.
Causes less fragmentation than static division into equal blocks

c.
Causes internal fragmentation

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answers are: Causes internal fragmentation, Causes external fragmentation, Causes less fragmentation than static division into equal blocks

The kernel (microkernel) is responsible for:

Question 3Select one or more:

a.
task control

b.
memory allocation and freeing

c.
interrupt handling (at the elementary level, then they are passed on to other layers).

d.
synchronization of processes and devices with processes

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the elementary level, then they are passed on to other layers).

In UNIX, access rights are specified:

Question 4Select one or more:

a.
Separately for write, read and execute/search

b.
Separately for the user, the group to which the user belongs and for all others

c.
Individually for each file

d.
At the same time, for all files in a given directory owned by the user

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answers are: Individually for each file, Separately for the user, the group to which the user belongs and for all others, Separately for write, read and execute/search

The logical address is also:

Question 5Select one or more:

a.
Relative address

b.
Effective address

c.
Physical address

d.
Absolute address

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Effective address

Internal fragmentation consists in:

Question 6Select one or more:

a.
The program does not use all the memory allocated to it

b.
Dividing the memory allocated to the program into a data area and a code area

c.
Free memory blocks between allocated blocks

d.
Discontiguous file allocation on disk

Which scheduling is used to organize concurrency?

Question 7Select one or more:

a.
medium-term

b.
short-term

c.
preempting

d.
long-term

Which of the following few common services can be partially provided by software other than the operating system?

Question 8Answer

a.
I/O operations

b.
Manipulating the file system

c.
Security and protection

d.
Running programs

he return from interrupt instruction:

Question 9Select one or more:

a.
restores general purpose registers

b.
restores the interrupt vector

c.
always jumps to the process that was interrupted

d.
restores the stack pointer

Operation V on a raised binary semaphore:

Question 10Select one or more:

a.
It is stored in order to be able to perform as many operations P as there were V

b.
It does not change the value of the semaphore

c.
Increases semaphore value by 1

The effective address is at the same time:

Question 11Select one or more:

a.
relative address

b.
indirect address

c.
logical address

d.
physical address

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: logical address

The hardware resources of a computer system are:

Question 12Select one or more:

a.
Windows on the screen

b.
Peripheral devices

c.
Processor time

d.
Primary memory

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Processor time, Primary memory, Peripheral devices

The following paging exceptions allow for returning to the program after they occur:

Question 13Select one or more:

a.
attempting to write to a write-protected frame

b.
attempt to read from the frame storing the code

c.
page fault

d.
interrupt on write (IOW)

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: page fault, interrupt on write (IOW)

How does the operating system call the task completion subroutine?

4.

Answer 1 Question 14
sets the trace in the terminating subroutine to the current position

2.

Answer 2 Question 14
builds the frame of the terminating subroutine on the task stack

1.

Answer 3 Question 14
builds an interrupt vector on the system stack pointing to the terminating subroutine code

3.

Answer 4 Question 14
recreates the context programmatically and executes the IRET instruction

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: 4. → recreates the context programmatically and executes the IRET instruction, 2. → sets the trace in the terminating subroutine to the current position, 1. → builds the frame of the terminating subroutine on the task stack, 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code

Dynamic relocation requires the use of:

Question 15Select one or more:

a.
limit register

b.
status register

c.
base register (DATUM)

d.
program counter

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: base register (DATUM)

What mechanism is used to desynchronize processes with different relative speeds?

Question 16Select one or more:

a.
buffer

b.
preempting

c.
interrupts

d.
scheduling

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: buffer

Which of the following information is stored on task switching?

Question 17Answer

a.
I/O status information

b.
Contents of datum, limit and other registers inaccessible to the program

c.

scheduler data

d.
Contents of general purpose registers, program counter, and similar registers available to the program

Feedback
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the program, Contents of general purpose registers, program counter, and similar registers available to the program

The direct resume rule means that:

Question 18Select one or more:

a.
The resuming process gets a critical region after the resumed process exits the critical region

b.
The resuming process applies for the critical region just like other processes waiting to enter the critical region

c.
The resuming process loses the critical region
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just like other processes waiting to enter the critical region

Static relocation is performed by:

Question 19Answer

a.
Special registers (DATUM)

b.
Loader

c.
Compiler

d.
Segment descriptors

Feedback
The correct answers are: Compiler, Loader

For address translation, the following is used:

Question 20Select one or more:

a.
reference and protection bits

b.
translation register

c.
associative translation buffer

d.
index table

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: index table, associative translation buffer

The system stack must provide space for:

Question 21Select one or more:

a.
CPU registers

b.
Processor registers in as many copies as there are devices in the system +1

c.
Processor registers in as many copies as there are interrupt lines +1

d.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: Processor registers in as many copies as there are interrupt lines +1

Connection with segmentation consists in:

Question 22Select one or more:

a.

The use of a segment table or pool of segment registers treated as an additional, superior level of paging

b.
Dividing pages into segments

c.
Generating a "frame error" interrupt when the frame containing the page does not belong to the current segment

d.
Identifying segments with pages

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: The use of a segment table or pool of segment registers treated as an additional, superior level of paging

What type of code can multiple processes execute simultaneously?

Question 23Select one or more:

a.
reentrant

b.
binary

c.
self-modifying

d.
dynamically relocated

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: reentrant

a page fault interrupt is issued when:

Question 24Select one or more:

a.
the program is accessing a page that is not in the cache

b.

the program accesses the page

c.
the program accesses a page that is not in the primary memory

d.
an error has occurred on the current page

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: the program accesses a page that is not in the primary memory

The scheduler decisions take the form:

Question 25Select one or more:

a.
change from ready to active state

b.
change from waiting to active state

c.
change from active to ready state

d.
change from waiting to ready state

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: change from ready to active state

Using the Test-And-Set instruction in synchronization:

Question 26Select one or more:

a.
Requires organizing inactive waiting in queues

b.
It requires processes to actively wait

c.
Requires an explicit relinquishment of the processor to another process

d.
Stops the processor if 0 is read

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: It requires processes to actively wait

Address translation aims to:

Question 27Select one or more:

a.
converting a physical address to a virtual one

b.
converting a virtual address to a physical one

c.
detecting the phenomenon of locality of references

d.
Generating a "frame error" interrupt when the page is out of memory

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: converting a virtual address to a physical one

System/user threads:

Question 28Select one or more:

a.
User-level threads share the same stack.

b.
User-level threads share the same execution context.

c.
System level thread descriptors are stored in the operating system kernel.

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: System level thread descriptors are stored in the operating system kernel.,

User-level threads share the same execution context.

The program must be specially compiled to run in paged memory.

Question 29Answer
True
False
Feedback
The correct answer is 'False'.

The mechanism for moving programs between parimary memory and mass storage is called:

Question 30Answer

a.
sweeping

b.
swapping

c.
leaching

d.
leading out

Feedback
The correct answer is: sweeping

The internal state of the file system layer is available for:

Question 31Answer

a.
Applications

b.
User programs

c.
OS kernel

d.
Program supervisor layer

Feedback
The correct answers are: OS kernel, Program supervisor layer

Sequence of actions when starting a new task:

1.

Answer 1 Question 32
filling in the descriptor in the kernel

2.

Answer 2 Question 32
memory allocation if this is the first task of the program

3.

Answer 3 Question 32
initialize the stack, fill the first frame

4.

Answer 4 Question 32
instruction to transfer control to the task

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: 1. → filling in the descriptor in the kernel, 2. → memory allocation if this is the first task of the program, 3. → initialize the stack, fill the first frame, 4. → instruction to transfer control to the task

The page index table address is stored in:

Question 33Select one or more:

a.
program counter

b.
page register

c.
stack pointer

d.
page table base register

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: page table base register

Is IOW bit:

Question 34Select one or more:

a.
protection bit

b.
reference bit

c.
enable bit

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: protection bit

When starting a program, how is control passed to it from the operating system?

Question 35Select one or more:

a.
extracode

b.
jump with trace

c.
jump

d.
return from interrupt handler IRET

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: return from interrupt handler IRET

The software resources of a computer system are:

Question 36Select one or more:

a.
Files

b.
Buffers

c.
Semaphores

d.
Primary memory

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: Files, Buffers, Semaphores

The main function of shared memory is:

Question 37Answer

a.
inter-process communication

b.
use working memory efficiently

c.
inter-process synchronization

d.
inter-process scheduling

Feedback
The correct answer is: inter-process communication

Which of the following facilities or abilities are required to provide mutual exclusion support?

Question 38Select one or more:

a.
The relative speeds of the tasks must be taken into account.

b.
Task scheduling must be considered.

c.
A task that is performed outside the critical section must not affect the behavior of a task in the critical section.

d.
The task stays in its critical section only for a finite amount of time.

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: A task that is performed outside the critical section must not affect the behavior of a task in the critical section., The task stays in its critical section only for a finite amount of time.

Allocation unit for file storage:

Question 39Answer

a.
must be constant across the disk partition

b.
may vary between partitions

c.
may differ between files in a partition

d.
is any integer multiple of a sector (>0)

Feedback
The correct answers are: must be constant across the disk partition, may vary between partitions

Frame protection bits:

Question 40Select one or more:

a.
must be available for group clear

b.
must be readable

c.
must be group readable

d.
must be available for writing

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: must be available for writing

The following situations cause "error" exceptions (processor internal interrupts)

Question 41Select one or more:

a.

extracode

b.

illegal instruction

c.

instruction legal but prohibited in user mode

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: illegal instruction, instruction legal but prohibited in user mode

Precise interrupts are:

Question 42Select one or more:

a.

unblocked only in a stable state between the execution of successive instructions

b.

only issued in a stable state between executions of subsequent instructions

c.

accepted only in a stable state between the execution of successive instructions

d.

transferred only in a stable state between the execution of successive instructions instrukcji

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: accepted only in a stable state between the execution of successive instructions

What mechanism is used to preserve the states of preempted tasks?

Question 43Answer

a.

time slice

b.

batch work

c.

task period

d.
context switch

Feedback
The correct answer is: context switch

In the sweeping mechanism, a program should be loaded into memory when:

Question 44Select one or more:

a.
The programmatical condition for the continuation of the program was met by another program

b.
The device the program was waiting for has freed up

c.
The time the program was supposed to be "wake up" has occurred

d.
The data transmission to the printer, ordered by the program, has ended

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: The data transmission to the printer, ordered by the program, has ended, The programmatical condition for the continuation of the program was met by another program, The device the program was waiting for has freed up, The time the program was supposed to be "wake up" has occurred

With indulgent scheduling, once a CPU is allocated to a task, the task keeps it until:

Question 45Select one or more:

a.
transition a task from the ready state to the active state

b.
releasing the processor by the task

c.
task termination

d.
transition a task from the active state to the ready state

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: task termination, releasing the processor by the task

The thread is also called:

Question 46Answer

a.
heavy process

b.
lightweight process

c.
data process

d.
overlay process

Feedback
The correct answer is: lightweight process

n UNIX, access rights are attributes:

Question 47Select one or more:

a.
An entry in the I-node table

b.
User descriptor

c.
A directory entry for a file

d.
A special table specifying access rights

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: An entry in the I-node table

Discontinuous allocation is the result of:

Question 48Select one or more:

a.
compacting

b.
paging

c.
reloaction

d.
segmentation

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: paging, segmentation

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Answer: Question 49
the exchange algorithm opposite to that expected with the measures taken is referred to as "sunspot equilibria". These equilibria arise due to stochastic fluctuations in agents' beliefs, leading to unexpected behavior in the exchange rate.
Feedback
The correct answer is: anomaly

Which of the following interrupts a running process?

Question 50Answer

a.
Hardaware interrupt

b.
Timer interrupts

c.
Scheduler

d.
Power fail interrupt

Feedback
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

Scheduling aims to optimize:

Question 51Select one or more:

a.
processor utilization

b.
reaction time

c.
wait time

d.
system throughput

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: processor utilization, system throughput, wait time, reaction time

The multi-level interrupt controller includes:

Question 52Select one or more:

a.
The register of interrupt being serviced

b.
Priority encoder

c.
Individual interrupt mask

d.
Collective interrupt mask

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Collective interrupt mask, Individual interrupt mask, Priority encoder

Using Test-And-Set or Compare-And-Swap in synchronization:

Question 53Select one or more:

a.
Stops the processor if 0 is read

b.
Requires organizing inactive waiting in queues

c.
It can only be applied in systems with shared memory

d.
It requires processes to actively wait

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: It requires processes to actively wait,
It can only be applied in systems with shared memory

Scheduling algorithms can be:

Question 54Answer

a.
indulgent

b.
preemptive

c.
interrupting

d.
term changing

Feedback
The correct answers are: indulgent, preemptive

The following situations trigger exceptions (processor internal interrupts) of the "error" type:

Question 55Select one or more:

a.
an attempt to write to the page for which the "read only" bit was set

b.
memory reference beyond limit register value

c.
memory reference in the area of the page that is not in memory

d.
a reference to memory that is not in the address space

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: a reference to memory that is not in the address space, memory reference beyond limit register value, an attempt to write to the page for which the "read only" bit was set

hat is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?

Question 56Select one or more:

a.
instruction register

b.
collective of individual interrupt mask

c.
program counter

d.
general purpose registers

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:

Question 57Select one or more:

a.
The size of the disk space

b.
Allocation unit size

c.
The number of bits of the field describing the size of the file

d.
The number of bits of the disk address

e.
FAT table size

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: FAT table size, The size of the disk space

Which of the following memory allocation schemes cause external fragmentation?

Question 58Answer

a.
Sweeping

b.
Segmentation

c.
Paging

d.
Multiple contiguous fixed partitions of equal size

Feedback
The correct answers are: Segmentation, Sweeping

The sweeping mechanism consists in:

Question 59Select one or more:

a.
Loading pages into the primary memory and sending them to the disk

b.
Loading segments into primary memory and sending them to disk

c.
Merging adjacent free memory blocks

d.
Moving programs around in memory to eliminate fragmentation

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Loading segments into primary memory and sending them to disk

Having two-level page index tables:

Question 60Select one or more:

a.
the content of a level I table element is added to the content of a level II table element

b.
the content of a level I table element points to a level II table

c.
the content of the level I table element is concatenated (combined) with the content of the level II table element

d.
the content of a level I table element is an index in a level II table

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: the content of a level I table element points to a level II table

What is the average time in the system for tasks in the batch, using SJF algorithm?

processing time

3.3

6.8

2.4

1.2

Answer:Question 61

3.8

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:

1

1

1

0

0

Parity disk

0

0

0

0

0

Disk 3

1

0

0

1

0

Disk 2

1

0

1

0

1

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 even.

Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?

Answer:Question 62
0 0 0 0
Feedback
The correct answer is: 10111

The virtual address consists of 8b page number and 8b offset. The page index table is shown below (index, content). For decimal address 384, binary 0000 0001 1000 0000, enter the physical address in the form: frame number.offset (as decimal numbers, offset in 3 digits). For example, for a physical address consisting of frame 0 and offset 18, specify 0.018. If there is no physical address for the given virtual address, then -1 should be specified.

7

12

6

-1

5

7

4

4

3

9

2

-1

1

3

0

2

Answer:Question 63
3.128
Feedback
The correct answer is: 3.128
##

##
############### File: Example1Overview.txt #########
##

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging

d. segmantation
Twoja odpowiedź jest poprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program

c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.

Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other

layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.

Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.

collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie

Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.

External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides

c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU

g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited

by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.

The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.

time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors

c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.

Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register

d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor

Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::

a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::

a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.

The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31

Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.

The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.

any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file

d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie

Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock

Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50

Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination

d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:

8192

The correct answer is: 8

32/32: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management

b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:

Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables

c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.

Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.

The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19

Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next

b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation

Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:

Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie

Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice

d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::

a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00

SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.

The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:

Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation

c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::

a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.

reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk

b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7

Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00

What is this technique where the operating system gathers programs and data together before processing?

a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs

b. Synchronizes processes

c.

It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again

Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision

interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack

c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepopoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper

Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie

Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO

b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?

a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.

dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.

need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59

Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:

01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

5/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:

Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie

Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.

reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation

d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

7/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted

d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:

a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.

page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch

c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44

Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready

d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie

Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

25/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

26/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.

Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00

Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:

Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory

c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie

Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before

processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes

c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.

The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20

Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?

Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.

switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.

The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33

Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00

After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set

c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.

Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated

d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52

Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction

b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie

Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip
is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second
bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk

00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished

Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00

The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:

Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.

Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::

a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the

elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie

Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set

b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00

In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address

b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.

dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63

Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.

The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page

d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00

BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00

In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.

The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.

The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie

Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.

Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.

Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies

for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.

It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00

When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.

Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie

Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.

39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::

a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.

occupies a processor

b. waits for an I/O operation to complete

c.

fills the CPU idle time

d. waits for a processor

Twoja odpowiedź jest poprawna.

The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 12

Częściowo poprawnie

Punkty: 0,50 z 1,00

BEST-FIT algorithm:

Select all correct::

a.

Requires sorting the cut part into the list of free blocks

b. It allows for quick determining whether there is a free block of the required size

c.

Avoids external fragmentation

d. Requires a descending sort of the list of free blocks

Twoja odpowiedź jest częściowo poprawna.

Poprawnie wybrałeś (-łaś): 1.

The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut

part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 13

Poprawnie

Punkty: 1,00 z 1,00

The microkernel of the operating system performs the following role:

Select all correct::

a.

Runs programs

b. Synchronizes processes

c.

It receives interrupts and routes them to the appropriate drivers and other layers of the system

Twoja odpowiedź jest poprawna.

The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other

layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 14

Poprawnie

Punkty: 1,00 z 1,00

Two successive executions of operation V in one process on a binary semaphore in down state:

Select all correct::

a.

Raises the semaphore if there are no suspended processes

b. It doesn't change anything

c.

Increases semaphore value by 2

d. If the semaphore guards a critical region, it can lets two processes enter the critical region

Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files

b. Peripheral devices

c.

User programs

d. Primary memory

Twoja odpowiedź jest niepoprawna.

The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 25

Poprawnie

Punkty: 1,00 z 1,00

Compaction solves the problem:

Select all correct::

a.

external fragmentation

b. swapping

c.

page fault

d. internal fragmentation

Twoja odpowiedź jest poprawna.

The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 26

Poprawnie

Punkty: 1,00 z 1,00

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception

is raised in system mode?

Select all correct::

a.

initializes the kernel system stack from the scratch

b. switches to the next kernel system stack

c.

switches back to the application program stack

d. nothing special, it builds the context on the kernel system stack

Twoja odpowiedź jest poprawna.

The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 27

Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:

Select all correct::

a.

Inserting a new item into the Table of Open Files of the Process

b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.

Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 34

Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:

Select all correct::

a.

exactly one process is waiting for a condition that cannot be met

b. at least two processes are waiting for conditions that cannot be met

c.

any greater than zero number of processes are waiting for conditions that cannot be met

d. any greater than one number of processes are waiting for conditions that cannot be met

Twoja odpowiedź jest poprawna.

The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 38

Poprawnie

Punkty: 1,00 z 1,00

What mechanism is used to preserve the states of preempted tasks?

a.

batch work

b. context switch

c.

time slice

d. task period

The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 39

Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?

Select all correct::

a.

FIFO

b. working set

c.

no algorithm

d. LRU

e.second chance

f.NRU

g.working set clock

h. clock

i.LFU

j.optimal

Twoja odpowiedź jest niepoprawna.

The correct answers is:

no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 40

Niepoprawnie

In a FAT-based disk system, file size is directly limited by:

Select all correct::

a.

The size of the disk space

b. The number of bits of the disk address

c.

The number of bits of the field describing the size of the file

d. Allocation unit size

e.

FAT table size

Twoja odpowiedź jest niepoprawna.

The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 41

Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?

Select all correct::

a.

second chance

b. NRU

c.

LRU

d. working set

e.LFU

f.no algorithm

g.clock

h. working set

i.

FIFO

Twoja odpowiedź jest niepoprawna.

The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 42

Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:

Select all correct::

a.

FAT table size

b. The number of bits of the field describing the size of the file

c.

The size of the disk space

d. The number of bits of the disk address

e.

Allocation unit size

Twoja odpowiedź jest niepoprawna.

The correct answers are: FAT table size, The size of the disk space

2

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.

LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::

a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.

generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying

c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip
is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second
bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should
be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00

Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:

Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::

a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2

d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.

Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.

Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00

By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:

Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU

c.

LFU

d. FIFO

e.LRU

f.second chance

g.working set clock

Twoja odpowiedź jest niepoprawna.

The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 47

Poprawnie

Punkty: 1,00 z 1,00

When the processor is released, the scheduler selects one of the queued processes:

Select all correct::

a.

suspended

b. running

c.

ready

d. waiting

Twoja odpowiedź jest poprawna.

The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 48

Niepoprawnie

What type of code can be executed simultaneously on multiple processors?

Select all correct::

a.

self-modifying

b. reentrant

c.

dynamically relocated

d. binary

Twoja odpowiedź jest niepoprawna.

The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 49

Poprawnie

Punkty: 1,00 z 1,00

Using the Test-And-Set instruction in synchronization:

Select all correct::

a.

Requires an explicit relinquishment of the processor to another process

b. Stops the processor if 0 is read

c.

Requires organizing inactive waiting in queues

d. It requires processes to actively wait

Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:

Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address

c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated

b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly

Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system

mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page

Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:

Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?

Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for

temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00

Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory

b. Processor time

c.

User programs

d. Peripheral devices

Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 29

Poprawnie

Punkty: 1,00 z 1,00

The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):

Select all correct::

a.

address translation, page index tables, page reference bits, "frame error" interrupt

b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory

c.

address translation, page index tables, "frame error" interrupt

d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper

Twoja odpowiedź jest poprawna.

The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 30

Poprawnie

Punkty: 1,00 z 1,00

The kernel (microkernel) is responsible for:

Select all correct::

a.

interrupt handling (at the elementary level, then they are passed on to other layers).

b. task control

c.

synchronization of processes and devices with processes

d. memory allocation and freeing

Twoja odpowiedź jest poprawna.

The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the

elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 31

Poprawnie

Punkty: 1,00 z 1,00

Which of the following interrupts a running process?

a.

Hardaware interrupt

b. Timer interrupts

c.

Power fail interrupt

d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just

like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38

Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait

d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:

Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader

d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00

What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22

Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.

Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

7/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.

current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

8/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::

a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.

User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00

What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.

suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie

Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors

task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:

and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie

Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.

Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames

d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00

What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch

b. switches to the next kernel system stack

c.

switches back to the application program stack

d. nothing special, it builds the context on the kernel system stack

Twoja odpowiedź jest poprawna.

The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 27

Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:

Select all correct::

a.

Inserting a new item into the Table of Open Files of the Process

b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.

Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

Twoja odpowiedź jest niepoprawna.

The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,

Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 28

Poprawnie

Punkty: 1,00 z 1,00

The resources of the computer system are:

Select all correct::

a.

Primary memory

b. Processor time

c.

User programs

d. Peripheral devices

Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 29

Poprawnie

Punkty: 1,00 z 1,00

The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):

Select all correct::

a.

address translation, page index tables, page reference bits, "frame error" interrupt

b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory

c.

address translation, page index tables, "frame error" interrupt

d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36

Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.

FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.

The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00

Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant

c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::

a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should
be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12
bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and
what happens when an exception

is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?

Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size

c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready

c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation

b. swapping

c.

page fault

d. internal fragmentation

Twoja odpowiedź jest poprawna.

The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 26

Poprawnie

Punkty: 1,00 z 1,00

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception

is raised in system mode?

Select all correct::

a.

initializes the kernel system stack from the scratch

b. switches to the next kernel system stack

c.

switches back to the application program stack

d. nothing special, it builds the context on the kernel system stack

Twoja odpowiedź jest poprawna.

The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 27

Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:

Select all correct::

a.

Inserting a new item into the Table of Open Files of the Process

b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.

Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

Twoja odpowiedź jest niepoprawna.

The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,

Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 28

Poprawnie

Punkty: 1,00 z 1,00

The resources of the computer system are:

Select all correct::

a.

Primary memory

b. Processor time

c.

User programs

d. Peripheral devices

Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.

batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41

Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running

c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:

Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58

Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing

time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry, Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:

Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk

b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7

Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00

What is this technique where the operating system gathers programs and data together before processing?

a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs

b. Synchronizes processes

c.

It receives interrupts and routes them to the appropriate drivers and other layers of the system

Twoja odpowiedź jest poprawna.

The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other

layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 14

Poprawnie

Punkty: 1,00 z 1,00

Two successive executions of operation V in one process on a binary semaphore in down state:

Select all correct::

a.

Raises the semaphore if there are no suspended processes

b. It doesn't change anything

c.

Increases semaphore value by 2

d. If the semaphore guards a critical region, it can lets two processes enter the critical region

Twoja odpowiedź jest poprawna.

The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the

semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 15

Poprawnie

Punkty: 1,00 z 1,00

In what states can a task occur?

Select all correct::

a.

current

b. ready

c.

resetted

d. blocked

Twoja odpowiedź jest poprawna.

The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 16

Niepoprawnie

Page thrashing is a phenomenon involving:

Select all correct::

a.

frequent context changes that require page index tables to be reloaded

b. frequent downloading of pages that have just been swapped out from memory

c.

frequently changing the values of bits describing pages in frames

d. loading the same page over and over again

Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision

interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack

c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper

Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

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Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie

Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO

b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?

a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.

dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.

need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59

Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:

01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::

a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory

c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie

Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before

processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes

c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.

The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20

Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?

Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.

switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.

The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33

Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00

After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set

c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.

Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated

d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52

Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction

b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie

Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk

00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: task control, synchronization of processes and devices with processes, interrupt handling (at the elementary level, then they are passed on to other layers).

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished

Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00

The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:

Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.

Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision
interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt
mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::

a.

Files

b. Peripheral devices

c.

User programs

d. Primary memory

Twoja odpowiedź jest niepoprawna.

The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 25

Poprawnie

Punkty: 1,00 z 1,00

Compaction solves the problem:

Select all correct::

a.

external fragmentation

b. swapping

c.

page fault

d. internal fragmentation

Twoja odpowiedź jest poprawna.

The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 26

Poprawnie

Punkty: 1,00 z 1,00

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception

is raised in system mode?

Select all correct::

a.

initializes the kernel system stack from the scratch

b. switches to the next kernel system stack

c.

switches back to the application program stack

d. nothing special, it builds the context on the kernel system stack

Twoja odpowiedź jest poprawna.

The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 27

Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:

Select all correct::

a.

Inserting a new item into the Table of Open Files of the Process

b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the

elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 37
Poprawnie

Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set

b. NRU

c.

LFU

d. FIFO

e.LRU

f.second chance

g.working set clock

Twoja odpowiedź jest niepoprawna.

The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 47

Poprawnie

Punkty: 1,00 z 1,00

When the processor is released, the scheduler selects one of the queued processes:

Select all correct::

a.

suspended

b. running

c.

ready

d. waiting

Twoja odpowiedź jest poprawna.

The correct answers is: ready

2

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Pytanie 48

Niepoprawnie

What type of code can be executed simultaneously on multiple processors?

Select all correct::

a.

self-modifying

b. reentrant

c.

dynamically relocated

d. binary

Twoja odpowiedź jest niepoprawna.

The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 49

Poprawnie

Punkty: 1,00 z 1,00

Using the Test-And-Set instruction in synchronization:

Select all correct::

a.

Requires an explicit relinquishment of the processor to another process

b. Stops the processor if 0 is read

c.

Requires organizing inactive waiting in queues

d. It requires processes to actively wait

Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00

In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address

b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.

dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63

Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
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Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m

Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.

The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie

Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00

In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything

c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs

The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:

Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt

handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37

Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.

The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.

working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait

Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie

Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.

generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

28/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::

a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.

Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.

current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::

a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.

User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00

What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.

suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie

Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors

task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.

batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
Started
State
Completed
Time used
Points
Rating

Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage

Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8

Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie

Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes

b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer

d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process

b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.

The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a

deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40

Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size

Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::

a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues

d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53

Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::

a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

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Exam 1: Sample Overview

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Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?

Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:

Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter

Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.

The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

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Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.

Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.

system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision
interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt
mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie

Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical

region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met

d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size

e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00

Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.

The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie

Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving

Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management

c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::

a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.

page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.

The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie

Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled

c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.

The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::

a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00

In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period

The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.

second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:

a.

who waited the longest in the queue

b. which was last placed in the queue

c.

with the least CPU requirement

d. which was first placed in the queue

The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 45

Poprawnie

Punkty: 1,00 z 1,00

Which of the following statements is true for system level threads?

a.

Kernel-level threads require their descriptors in the kernel.

b. User-level threads can be synchronized by the kernel.

c.

The threading implementation at the kernel level is done by the thread library attached to the program.

d. Multithreaded applications cannot use multiprocessing.

The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 46

Niepoprawnie

Which swapping algorithms use the last reference time?

Select all correct::

a.

working set

b. NRU

c.

LFU

d. FIFO

e.LRU

f.second chance

g.working set clock

Twoja odpowiedź jest niepoprawna.

The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 47

Poprawnie

Punkty: 1,00 z 1,00

When the processor is released, the scheduler selects one of the queued processes:

Select all correct::

a.

suspended

b. running

c.

ready

d. waiting

Twoja odpowiedź jest poprawna.

The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::

a.

address of the segment page index table of the bottom-level (last level) in the hierarchy

b. addresses of all segment page index tables

c.

address of the segment page index table of the top-level (first level) in the hierarchy

Twoja odpowiedź jest poprawna.

The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52

Poprawnie

Punkty: 1,00 z 1,00

The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:

Select all correct::

a.

time slicing

b. priority

c.

SJF

d. FCFS

Twoja odpowiedź jest poprawna.

The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 53

Poprawnie

Punkty: 1,00 z 1,00

In indulgent scheduling, the process keeps the CPU until:

Select all correct::

a.

next interrupt from the timer

b. next interrupt from the device

c.

termination

d. waiving

Twoja odpowiedź jest poprawna.

The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 54

Poprawnie

Punkty: 1,00 z 1,00

A process can appear in the pool of scheduling processes as a result of:

Select all correct::

a.

Starting a new process

b. Completing an I/O operation

c.

Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.

Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems

b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State

Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache

b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the

program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00

Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.

Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.

The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control

c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.

External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:

no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.

The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46

Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.

Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.

The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56

Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12
bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00

Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6

Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::

a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.

Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.

resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping

c.

page fault

d. internal fragmentation

Twoja odpowiedź jest poprawna.

The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 26

Poprawnie

Punkty: 1,00 z 1,00

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception

is raised in system mode?

Select all correct::

a.

initializes the kernel system stack from the scratch

b. switches to the next kernel system stack

c.

switches back to the application program stack

d. nothing special, it builds the context on the kernel system stack

Twoja odpowiedź jest poprawna.

The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 27

Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:

Select all correct::

a.

Inserting a new item into the Table of Open Files of the Process

b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.

Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

Twoja odpowiedź jest niepoprawna.

The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,

Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 28

Poprawnie

Punkty: 1,00 z 1,00

The resources of the computer system are:

Select all correct::

a.

Primary memory

b. Processor time

c.

User programs

d. Peripheral devices

Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32

Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work

b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.

ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51

Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::

a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie

Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8

Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.

address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.

restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time

d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:

Select all correct::

a.

Requires relative references to be addressed when the program is loaded into memory

b. Requires hardware support in the form of a LIMIT register

c.

Requires hardware support in the form of a DATUM register

d. Allows for temporal elimination of external fragmentation

Twoja odpowiedź jest niepoprawna.

The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external

fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 19

Poprawnie

Punkty: 1,00 z 1,00

Paging - the key in associative memory is:

Select all correct::

a.

page number

b. the page number concatenated with the frame number

c.

the frame number concatenated with the page number

d. frame number

Twoja odpowiedź jest poprawna.

The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20

Poprawnie

Punkty: 1,00 z 1,00

The file system layer plays the following role in the operating system:

Select all correct::

a.

Controls file access rights

b. It performs directory services in the hierarchy of disk files

c.

It runs programs stored in files

d. Performs file opening and closing operations

Twoja odpowiedź jest poprawna.

The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,

Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21

Poprawnie

Punkty: 1,00 z 1,00

Devices report their readiness by:

Select all correct::

a.

system call

b. issuing an interrupt

c.

setting a status bit

d. unblocking the interrupts

Twoja odpowiedź jest poprawna.

The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22

Niepoprawnie

Scheduling disk access involves deciding on the following:

a.

which drive should be used next

b. the order in which disk access requests should be handled

c.

about the physical location of the files

d. about the type of disks the system should have

The correct answers is: the order in which disk access requests should be handled

1

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 23

Poprawnie

Punkty: 1,00 z 1,00

What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?

Select all correct::

a.

general purpose registers

b. instruction register

c.

collective of individual interrupt mask

d. program counter

Twoja odpowiedź jest poprawna.

The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 24

Niepoprawnie

The resources of the computer system are:

Select all correct::

a.

Files

b. Peripheral devices

c.

User programs

d. Primary memory

Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::

a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met

c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.

The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43

Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance

g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.

termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.

The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB

Answer:
8192

The correct answer is: 8

32/32: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?

and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00

Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables

b. multilevel page index tables

c.

page swapping

d. address translation

e.

associative memory of page references

Twoja odpowiedź jest niepoprawna.

The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page

references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 10

Poprawnie

Punkty: 1,00 z 1,00

What is this technique where the operating system gathers programs and data together before processing?

a.

Distributed processing

b. Interactive processing

c.

Real-time processing

d. Batch processing

The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 11

Poprawnie

Punkty: 1,00 z 1,00

In the "current" state, there is a process that:

Select all correct::

a.

occupies a processor

b. waits for an I/O operation to complete

c.

fills the CPU idle time

d. waits for a processor

Twoja odpowiedź jest poprawna.

The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 12

Częściowo poprawnie

Punkty: 0,50 z 1,00

BEST-FIT algorithm:

Select all correct::

a.

Requires sorting the cut part into the list of free blocks

b. It allows for quick determining whether there is a free block of the required size

c.

Avoids external fragmentation

d. Requires a descending sort of the list of free blocks

Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked

Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.

which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault

d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35

Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.

time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?

Select all correct::

a.

second chance

b. NRU

c.

LRU

d. working set

e.LFU

f.no algorithm

g.clock

h. working set

i.

FIFO

Twoja odpowiedź jest niepoprawna.

The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 42

Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:

Select all correct::

a.

FAT table size

b. The number of bits of the field describing the size of the file

c.

The size of the disk space

d. The number of bits of the disk address

e.

Allocation unit size

Twoja odpowiedź jest niepoprawna.

The correct answers are: FAT table size, The size of the disk space

2

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 43

Poprawnie

Punkty: 1,00 z 1,00

Using Test-And-Set or Compare-And-Swap in synchronization:

Select all correct::

a.

Can be applied only in distributed systems

b. Stops the processor if 0 is read

c.

It requires processes to actively wait

d. Requires organizing inactive waiting in queues

Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 44

Poprawnie

Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting

Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00

The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process

b. Completing an I/O operation

c.

Performing V operation on the semaphore

d. Performing the P operation on the semaphore

Twoja odpowiedź jest poprawna.

The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 55

Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:

Select all correct::

a.

need for compaction

b. internal fragmentation

c.

external fragmentation

Twoja odpowiedź jest niepoprawna.

The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 56

Niepoprawnie

MMU uses index tables to:

Select all correct::

a.

generate a relative address

b. generate a physical address

c.

generate an effective address

d. generate a logical address

Twoja odpowiedź jest niepoprawna.

The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 57

Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Odpowiedź:

thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 58

Poprawnie

Punkty: 1,00 z 1,00

Address translation mechanism:

Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation

c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

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Odpowiedź:
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The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00

Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
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Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
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c.
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d. reentrant
Twoja odpowiedź jest niepoprawna.
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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
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Niepoprawnie
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The system is equipped with 2 processors
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Odpowiedź:3.375

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bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
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In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
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Answer:
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The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32
##

##
##############   File: ExamExam.txt #########
##
Question 1
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The page fault interrupt is used to:
Question 1Select one or more:
a.
Detection of an attempt to write outside the address space of the frame
b.
Whether the frame is empty or contains a page
c.
Downloads to the memory of the requested page
d.
Detection of an access attempt from a frame not allocated to the program
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: Downloads to the memory of the requested page
Question 2
Incorrect
Mark 0.00 out of 1.00
Flag question

Question text

The following situations trigger "error" exceptions:

Question 2Select one or more:

a.

memory reference in the area of the page that is not in memory

b.

memory reference beyond limit register value

c.

a reference to memory that is not in the program address space

d.

an attempt to execute an instruction from the area of the page for which the "no code" bit was set

Feedback

Twoja odpowiedź jest niepoprawna.The correct answers are: a reference to memory that is not in the program address space, memory

reference beyond limit register value, an attempt to execute an instruction from the area of the page for which the "no code" bit was set

Question 3

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

Which of the following information is stored on task switching?

Question 3Answer

a.

Contents of the instruction register and similar registers

b.

contents of general purpose registers, program counter, and similar registers available to the program

c.

scheduler data

d.

I/O status information

Feedback

The correct answers are: I/O status information, scheduler data, contents of general purpose registers, program counter, and similar registers available to the program

Question 4

Correct

Mark 1.00 out of 1.00

Flag question

Question text

What can happen when a job leaves the critical section and more than 1 task is waiting for the critical section?

Question 4Select one or more:

a.

starvation awaiting a critical section

b.

letting both tasks into the critical section

c.

deadlock waiting for critical section

d.active waiting for a critical section

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: starvation awaiting a critical section

Question 5

Incorrect

Question text
The root directory of the disk should be located:
Question 5Answer

a.

in a place hard-coded in the structures of the operating system

b.

in a permanent place on the disk

c.

at a fixed address in main memory

d.

in a place designated by the data structure in a fixed location on the disk

Feedback

The correct answer is: in a place designated by the data structure in a fixed location on the disk

Question 6

Question text

Which of the following information is stored on task switching?

Question 6Answer

a.

Contents of datum, limit and other registers inaccessible to the program

b.

Contents of general purpose registers, program counter, and similar registers available to the program

c.

I/O status information

d.scheduler data

Feedback

The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the program, Contents of general purpose registers, program counter, and similar registers available to the program

Question 7

Question text

What mechanism is part of time-sharing systems?

Question 7Answer

a.

medium-level scheduler

b.

low-level scheduler

c.

swapping

d.

high-level scheduler

Feedback

The correct answer is: low-level scheduler

Question 8

Question text
In a FAT-based disk system, file size is directly limited by:
Question 8Select one or more:
a.
The number of bits of the disk address
b.
The number of bits of the field describing the size of the file
c.
The size of the disk space
d.
FAT table sizee.
Allocation unit size
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file
Question 9
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Which technique was introduced because a single task could occupy both the CPU and I/O devices?
Question 9Select one or more:
a.
Buffering
b.
Multiprogramming
c.
Preemptive scheduling
d.
Interrupts
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answer is: Interrupts
Question 10
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Individual interrupt mask:
Question 10Select one or more:
a.
register in which addresses of devices reporting individual interrupts are stored
b.
a combinational circuit that calculates the number of the interrupt receivedc.
a register whose bits are ORed (alternative) with the bits from the interrupt request register
d.
a register whose bits are ANDed (conjunction) with the bits from the interrupt request register
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: a register whose bits are ANDed (conjunction) with the bits from the interrupt request register
Question 11
Incorrect

Mark 0.00 out of 1.00
Flag question
Question text
Which swapping algorithms use the current time slice number?
Question 11Select one or more:
a.
FIFO
b.
LRU
c.
no algorithm
d.
clock
e.
working set
f.
LFU
g.
optimal
h.
second chance
i.
NRU
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answers are: second chance, working setQuestion 12
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Paging - two-level index tables mode of operation
Question 12Select one or more:
a.
The content of a level 1 table element points to a level 2 table
b.
The content of a level 1 table element is an index in a level 2 table
c.
The content of a level 1 table element points to a level 2 table
d.
The content of the level 1 table element is concatenated (combined) with the content of the level 2 table element
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answer is: The content of a level 1 table element points to a level 2 table
Question 13
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What is a scheduler?
Question 13Select one or more:
a.
the system process that allocates the processor
b.
memory allocation procedure

c.

a kernel routine that selects a task to execute

d.

procedure that schedules frame release in the page replace algorithm

Feedback

Twoja odpowiedź jest poprawna.The correct answer is: a kernel routine that selects a task to execute

Question 14

Correct

Mark 1.00 out of 1.00

Flag question

Question text

In indulgent scheduling, the process keeps the CPU until:

Question 14Select one or more:

a.

termination

b.

waiving

c.

next interrupt from the device

d.

next interrupt from the timer

Feedback

Twoja odpowiedź jest poprawna.

The correct answers are: waiving, termination

Question 15

Partially correct

Mark 0.50 out of 1.00

Flag question

Question text

How does the operating system call the task completion subroutine?

Answer 1 Question 15Choose...recreates the context programmatically and executes the IRET 2. instructionsets the trace in the terminating subroutine to the current positionbuilds the frame of the terminating subroutine on the task stackbuilds an interrupt vector on the system stack pointing to the terminating subroutine code

Answer 2 Question 15Choose...recreates the context programmatically and executes the IRET 4. instructionsets the trace in the terminating subroutine to the current positionbuilds the frame of the terminating subroutine on the task stackbuilds an interrupt vector on the system stack pointing to the terminating subroutine code

Answer 3 Question 15Choose...recreates the context programmatically and executes the IRET 3. instructionsets the trace in the terminating subroutine to the current positionbuilds the frame of the terminating subroutine on the task stackbuilds an interrupt vector on the system stack pointing to the terminating subroutine code

1. Answer 4 Question 15Choose...recreates the context programmatically and executes the IRETinstructionsets the trace in the terminating subroutine to the current positionbuilds the frame of the terminating subroutine on the task stackbuilds an interrupt vector on the system stack pointing to the terminating subroutine code

Feedback

Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answer is: 2. → sets the trace in the terminating subroutine to the current position, 4. → recreates the context programmatically and executes the IRET instruction, 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code, 1. → builds the frame of the terminating subroutine on the task stack

Question 16

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Two successive executions of operation V in one process on a binary semaphore in down state:

Question 16Select one or more:

a.

Raises the semaphore if there are no suspended processes

b.

Increases semaphore value by 2

c.

It doesn't change anything

d.

If the semaphore guards a critical region, it can lets two processes enter the critical region

Feedback

Twoja odpowiedź jest poprawna.

The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the semaphore if there are no suspended processes

Question 17

Correct

Mark 1.00 out of 1.00

Flag question

Question text

What does the kernel do when there is no task (process) to run?

Question 17Select one or more:a.

resets the entire system

b.

executes an infinite loop in the kernel until a task arrives

c.

starts the idle task

d.

switches off the power supply

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: starts the idle task

Question 18

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

Address translation mechanism:

Question 18Select one or more:

a.

concatenates the frame number and page number

b.

concatenates the frame number and offset on the page

c.

adds the frame number to the page number

d.

concatenates the page number and page offset

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answer is: concatenates the frame number and offset on the page

Question 19

Incorrect

Mark 0.00 out of 1.00

Flag question
Question text
Physical address:
Question 19Select one or more:a.
indicates a relative address to the segment register
b.
points to a location in the address space of primary memory
c.
points to a cell in the process address space
d.
is contained in the address field of the instruction
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answer is: points to a location in the address space of primary memory
Question 20
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The operating system plays the following role in a computer system:
Question 20Select one or more:
a.
relational database management
b.
computer system resource management
c.
compiling and running programs
d.
Create a concurrent environment
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: Create a concurrent environment, computer system resource
management
Question 21
Correct
Mark 1.00 out of 1.00
Flag question
Question text
MMU uses index tables to:Question 21Select one or more:
a.
generate a relative address
b.
generate a physical address
c.
generate an effective address
d.
generate a logical address
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: generate a physical address
Question 22
Correct
Mark 1.00 out of 1.00
Flag question
Question text

What mechanism is used to save and restore the task state?
Question 22Answer

a.
context switch

b.
task descriptor

c.
scheduling data

d.
applications counter

Feedback
The correct answer is: context switch

Question 23
Correct
Mark 1.00 out of 1.00
Flag question

Question text
Discontinuous allocation is the result of:
Question 23Select one or more:a.
segmantation

b.
paging

c.
relocation

d.
compaction

Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

Question 24
Correct
Mark 1.00 out of 1.00
Flag question

Question text
Internal fragmentation consists in:
Question 24Select one or more:

a.
Discontinuous program memory allocation

b.
The program does not use all the memory allocated to it

c.
Dividing the memory allocated to the program into a data area and a code area

d.
Free memory blocks between allocated blocks

Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: The program does not use all the memory allocated to it

Question 25
Incorrect
Mark 0.00 out of 1.00
Flag question

Question text
The following paging exceptions allow for returning to the program after they occur:
Question 25Select one or more:a.
interrupt on write (IOW)

b.

page fault

c.

attempting to write to a write-protected frame

d.

attempt to read from the frame storing the code

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: page fault, interrupt on write (IOW)

Question 26

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Static relocation is performed by:

Question 26Answer

a.

Special registers (LIMIT)

b.

Paging system

c.

Segment descriptors

d.

Loader

Feedback

The correct answer is: Loader

Question 27

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

For address translation, the following is used:

Question 27Select one or more:

a.index table

b.

reference and protection bits

c.

translation register

d.

associative translation buffer

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: index table, associative translation buffer

Question 28

Partially correct

Mark 0.50 out of 1.00

Flag question

Question text

Static relocation is performed by:

Question 28Answer

a.

Segment descriptors

b.

Paging system

c.

Linker
d.
Compiler
Feedback
The correct answers are: Compiler, Linker
Question 29
Correct
Mark 1.00 out of 1.00
Flag question
Question text
In UNIX, access rights are specified:
Question 29Select one or more:
a.
At the same time, for all files in a given directory owned by the userb.
Individually for each file
c.
Separately for write, read and execute/search
d.
Separately for the user, the group to which the user belongs and for all others
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: Individually for each file, Separately for the user, the group to which the user belongs and for all others, Separately for write, read and execute/search
Question 30
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Calling the program with the "exec" operation results in (accurately to the result of the exec operation):
Question 30Select one or more:
a.
Loading a code segment from disk, duplicating the data segment of the calling process
b.
Loading code and data segments from disk, initializing a new stack segment
c.
Loading a code segment from disk, duplicating data segments and the calling process stack
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: Loading code and data segments from disk, initializing a new stack segment
Question 31
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Scheduler function is:
Question 31Answera.
selecting a task to run
b.
scheduling tasks on the processor
c.
counting the CPU time used by tasks
d.
changing task priorities

Feedback
The correct answer is: selecting a task to run
Question 32
Correct
Mark 1.00 out of 1.00
Flag question
Question text
In the philosophers problem, if there are 4 of them:
Question 32Select one or more:
a.
Starvation is possible
b.
Deadlock is possible
c.
Deadlock is not possible
d.
Starvation is not possible
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: Deadlock is possible, Starvation is not possible
Question 33
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The kernel (microkernel) is responsible for:
Question 33Select one or more:a.
memory allocation and freeing
b.
synchronization of processes and devices with processes
c.
interrupt handling (at the elementary level, then they are passed on to other layers).
d.
task control
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes,
interrupt handling (at the elementary level, then they are passed on to other layers).
Question 34
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The software resources of a computer system are:
Question 34Select one or more:
a.
Primary memory
b.
Files
c.
Semaphores
d.
Buffers
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Files, Buffers, Semaphores

Question 35
Partially correct
Mark 0.50 out of 1.00
Flag question

Question text
Which of the following memory allocation schemes causes external fragmentation?Question 35Answer

a.
Sweeping

b.
Multiple contiguous fixed partitions of equal size

c.
Multiple contiguous fixed partitions of various sizes

d.
Paging

Feedback
The correct answers are: Sweeping, Multiple contiguous fixed partitions of various sizes

Question 36
Correct
Mark 1.00 out of 1.00
Flag question

Question text
Dynamic relocation is performed by:
Question 36Answer

a.
Special registers (DATUM)

b.
Loader

c.
Linker

d.
Compiler

Feedback
The correct answer is: Special registers (DATUM)

Question 37
Incorrect
Mark 0.00 out of 1.00
Flag question

Question text
Can the exchange algorithm: selecting a frame to empty and loading a new page, be performed in user mode?
Question 37Answer

TrueFalse

Feedback
The correct answer is 'True'.

Question 38
Correct
Mark 1.00 out of 1.00
Flag question

Question text
To end the interrupt service, use the following instruction:
Question 38Select one or more:

a.
regular jump instruction

b.

special return instruction

c.

none - the processor will end the service automatically

d.

return from subroutine call

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: special return instruction

Question 39

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Using the Test-And-Set instruction in synchronization:

Question 39Select one or more:

a.

Stops the processor if 0 is read

b.

Requires organizing inactive waiting in queues

c.

It requires processes to actively wait

Feedback

Twoja odpowiedź jest poprawna.The correct answer is: It requires processes to actively wait

Question 40

Correct

Mark 1.00 out of 1.00

Flag question

Question text

The Test-And-Set or Compare-And-Swap instruction has the following characteristics:

Question 40Select one or more:

a.

Requires active waiting from tasks

b.

It is possible to deadlock with TAS/CAS operations on multiple variables

c.

It is possible to use only on computers with common memory

d.

It is possible to use only in 1-processor systems

Feedback

Twoja odpowiedź jest poprawna.

The correct answers are: Requires active waiting from tasks, It is possible to use only on computers with common memory, It is possible to deadlock with TAS/CAS operations on multiple variables

Question 41

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Interrupt mask:

Question 41Select one or more:

a.

must be part of the status register

b.

can unblock interrupts when the interrupt handler completes

c.

causes interrupts to be disabled when an interrupt is accepted

d.

can be set and reset by special processor instructionsFeedback

Twoja odpowiedź jest poprawna.

The correct answers are: causes interrupts to be disabled when an interrupt is accepted, can unblock interrupts when the interrupt handler completes, can be set and reset by special processor instructions

Question 42

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

Allocation unit for file storage:

Question 42Answer

a.

must be constant across the disk partition

b.

may be a variable in a partition

c.

may differ between files on a partition

d.

It should be selected to match the characteristics of the data

Feedback

The correct answer is: must be constant across the disk partition

Question 43

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

Allocation unit for storing files:

Question 43Answer

a.

may vary between partitions

b.

may differ between files in a partition

c.

must be constant across the disk partition

d.

it should be selected to match the characteristics of the dataFeedback

The correct answers are: must be constant across the disk partition, may vary between partitions

Question 44

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

Which swapping algorithms use page reference history?

Question 44Select one or more:

a.

NRU

b.

LRU

c.

FIFO

d.

working set

e.

working set clock

f.

LFU

g.

second chance

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: LRU, LFU

Question 45

Correct

Mark 1.00 out of 1.00

Flag question

Question text

What type of code can multiple processes execute simultaneously?

Question 45Select one or more:

a.

dynamically relocated

b.reentrant

c.

binary

d.

self-modifying

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: reentrant

Question 46

Correct

Mark 1.00 out of 1.00

Flag question

Question text

The thread is also called:

Question 46Answer

a.

overlay process

b.

lightweight process

c.

heavy process

d.

data process

Feedback

The correct answer is: lightweight process

Question 47

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Round-robin scheduling is the best mechanism for:

Question 47Select one or more:

a.

time-sharing system

b.

real-time systemc.

system with different classes of tasks

d.

every system

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: time-sharing system

Question 48

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Context switch is:

Question 48Select one or more:

a.

calling the kernel of the operating system

b.

switching to the system stack

c.

extracode execution

d.

writing registers to the task stack and retrieving them from another task stack

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: writing registers to the task stack and retrieving them from another task stack

Question 49

Correct

Mark 1.00 out of 1.00

Flag question

Question text

The following situations cause the exceptions (processor internal interrupts) of the "error" type:

Question 49Select one or more:

a.

memory reference beyond limit register value

b.an attempt to write to the page for which the "read only" bit is set

c.

memory reference in the area of the page that is not in memory

d.

a reference to memory that is not in the address space

Feedback

Twoja odpowiedź jest poprawna.

The correct answers are: a reference to memory that is not in the address space, memory reference beyond limit register value, an attempt to write to the page for which the "read only" bit is set

Question 50

Correct

Mark 1.00 out of 1.00

Flag question

Question text

A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Question 50Select one or more:

a.

sweeping

b.

paging

c.

swapping

d.

mapping

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: paging

Question 51

Partially correct

Mark 0.50 out of 1.00

Flag question

Question text

Separate allocation queues for fixed memory blocks of equal size cause:

Question 51Select one or more:a.

need for compaction

b.

internal fragmentation

c.

external fragmentation

Feedback

Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: internal fragmentation, external fragmentation

Question 52

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

A multiuser system is one that, in principle:

Question 52Select one or more:

a.

Requires the use of timer interrupts

b.

Must be multi-threaded

c.

Allows multiple processes to actually run simultaneously

d.

Must be concurrent

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: Must be concurrent, Requires the use of timer interrupts

Question 53

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

In which swapping algorithms is it necessary to collectively clear the M-bits?

Question 53Select one or more:

a.no algorithm

b.

clock

c.

FIFO

d.

NRU

e.

working set

f.

LFU

g.

second chance

h.

LRU

i.

working set clock

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answer is:

no algorithm

Question 54

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Interrupt request register is:

Question 54Select one or more:

a.

a register that blocks or unblocks all interrupts

b.

a combinational circuit that calculates the number of the interrupt received

c.

a register where interrupt line states are stored

d.

a register that blocks or unblocks individual interruptsFeedback

Twoja odpowiedź jest poprawna.

The correct answer is: a register where interrupt line states are stored

Question 55

Partially correct

Mark 0.50 out of 1.00

Flag question

Question text

The internal state of the file system layer is available for:

Question 55Answer

a.

OS kernel

b.

Program supervisor layer

c.

User programs

d.

Applications

Feedback

The correct answers are: OS kernel, Program supervisor layer

Question 56

Correct

Mark 1.00 out of 1.00

Flag question

Question text

"Soft" real-time system:

Question 56Select one or more:

a.

Guaranteed response time

b.

Guarantees average response time

c.

Guarantees interrupt handling time

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: Guarantees average response timeQuestion 57

Correct

Mark 1.00 out of 1.00

Flag question

Question text

At the suspended state is a process that:

Question 57Select one or more:

a.

waits for an I/O operation to complete

b.

fills the processor idle time

c.

waits for a processor

d.

occupies a processor

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: waits for an I/O operation to complete

Question 58

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Processor access scheduling decisions may be made under which of the following circumstances?

Question 58Select one or more:

a.

When a task goes from the waiting state to the ready state

b.

When a task transitions from the active state to the ready state

c.

When a task terminates

d.

When a task goes from the active state to the waiting state

Feedback

Twoja odpowiedź jest poprawna.The correct answers are: When a task goes from the active state to the waiting state, When a task

transitions from the active state to the ready state, When a task goes from the waiting state to the ready state, When a task terminates

Question 59

Correct

Mark 1.00 out of 1.00

Flag question

Question text

The key in associative memory is:

Question 59Select one or more:

a.

Frame number

b.

The frame number concatenated with the page number

c.

Page number

d.

The page number concatenated with the frame number

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: Page number

Question 60

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

The sweeping mechanism consists in:

Question 60Select one or more:

a.

Loading segments into primary memory and sending them to disk

b.

Moving programs around in memory to eliminate fragmentation

c.

Merging adjacent free memory blocks

d.

Loading pages into the primary memory and sending them to the diskFeedback

Twoja odpowiedź jest niepoprawna.

The correct answer is: Loading segments into primary memory and sending them to disk

Question 61

Correct

Mark 5.00 out of 5.00

Flag question

Question text

What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 3 processors

task

1

processing time 3.3

234

5.22.31.5

Answer:Question 61

Feedback

The correct answer is: 3.5

Question 62

Incorrect

Mark 0.00 out of 5.00

Flag question

Question text

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:

11100Parity disk

00000Disk 3

10010Disk 2

10110Disk 1

01100Disk 0In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits
0-3 even.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:Question 62
Feedback
The correct answer is: 10100
Question 63
Correct
Mark 5.00 out of 5.00
Flag question
Question text
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits, and all entries in the TIS page index table are on a 2-byte word boundary, specify:
- the maximum size of the program's virtual memory in MB
Answer:Question 63
Feedback
The correct answer is: 8
##

##
##############   File: AhsanTest2.txt #########
##
The system stack must provide space for:
Select one or more:
a.
Processor registers in as many copies as there are devices in the system +1
b. Processor registers in as many copies as there are interrupt lines and possible software interrupts
c.
CPU registers
d. Processor registers in as many copies as there are interrupt lines +1
Twoja odpowiedź jest poprawna.
The correct answer is: Processor registers in as many copies as there are interrupt lines +1

Twice consecutive execution in one process of operation P on a raised binary semaphore:
Select one or more:
a.
It doesn't change anything
b. Causes the semaphore to get down
c.
If a semaphore guards a critical region, it leads to a deadlock
d. Decreases semaphore value by 2
Twoja odpowiedź jest poprawna.
The correct answers are: If a semaphore guards a critical region, it leads to a deadlock, Causes the semaphore to get down

n UNIX, access rights are attributes:
Select one or more:
a.
A special table specifying access rights
b. User descriptor
c.
A directory entry for a file

d. An entry in the I-node table
Twoja odpowiedź jest poprawna.
The correct answer is: An entry in the I-node table

he kernel (microkernel) is responsible for:
Select one or more:
a.
memory allocation and freeing
b. interrupt handling (at the elementary level, then they are passed on to other layers).
c.
synchronization of processes and devices with processes
d. task control
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the elementary
level, then they are passed on to other layers).

n multi-level interrupts (vectored interrupts) the jump is performed:
Select one or more:
a.
to the address specified in the given processor register
b. to a fixed address
c.
to the address contained in the device driver, provided by the I/O instruction
d. according to the table indexed by the interrupt number
Twoja odpowiedź jest poprawna.
The correct answer is: according to the table indexed by the interrupt number

n UNIX, the disk contains the following areas:
Select one or more:
a.
Files data
b. I-node table
c.
Directories
d. SuperBlock
Twoja odpowiedź jest poprawna.
The correct answers are: SuperBlock, I-node table, Files data

What is this technique where the operating system gathers programs and data together before processing?
a.
Batch processing
b. Real-time processing
c.
Distributed processing
d. Interactive processing
The correct answer is: Batch processing

The page fault interrupt is used to:
Select one or more:
a.
Detection of an attempt to write outside the address space of the frame

b. Whether the frame is empty or contains a page

c.

Downloads to the memory of the requested page

d. Detection of an access attempt from a frame not allocated to the program

Twoja odpowiedź jest poprawna.

The correct answer is: Downloads to the memory of the requested page

Scheduling algorithms can be:

a.

interrupting

b. term changing

c.

indulgent

d. preemptive

The correct answers are: indulgent, preemptive

The resources of the computer system are:

Select one or more:

a.

Primary memory

b. User programs

c.

Processor time

d. Peripheral devices

Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answers are: Primary memory, Peripheral devices, Processor time

When is the scheduler called?

Select one or more:

a.

at the request of a user task

b. when the scheduler decides itself

c.

at the end of the execution of each kernel procedure

d. at the start of execution of each kernel procedure

Twoja odpowiedź jest poprawna.

The correct answer is: at the end of the execution of each kernel procedure

A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Select one or more:

a.

paging

b. mapping

c.

fragmentation

d. swapping

Twoja odpowiedź jest poprawna.

The correct answer is: paging

What does the file system layer do?
a.
Manages files
b. Manages remote file systems
c.
Manages remote files
d. Manages relationships between files
The correct answer is: Manages files

ndulgent scheduling is the best mechanism for:
Select one or more:
a.
system with many process classes
b. time-sharing system
c.
real-time system
d. every system
Twoja odpowiedź jest poprawna.
The correct answer is: real-time system

What does the kernel do when there is no task (process) to run?
Select one or more:
a.
switches off the power supply
b. resets the entire system
c.
executes an infinite loop in the kernel until a task arrives
d. starts the idle task
Twoja odpowiedź jest poprawna.
The correct answer is: starts the idle task

The internal state of the program supervisor layer is available for:
a.
OS kernel
b. Applications
c.
File system layer
d. User programs
The correct answer is: OS kernel

Discontinuous allocation is the result of:
Select one or more:
a.
compacting
b. paging
c.
reloaction
d. segmentation
Twoja odpowiedź jest poprawna.

The correct answers are: paging, segmentation

Paging is in thrashing if:
a.
the system spends more time paging than execution
b. the system spends less time paging than execution
c.
page faults occur
d. page cannot be swapped
The correct answer is: the system spends more time paging than execution

The return from interrupt instruction:
Select one or more:
a.
restores the process stack
b. restores the conditions register
c.
causes the processor to switch to a process other than the interrupted one
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

Dynamic relocation requires the use of:
Select one or more:
a.
base register (DATUM)
b. status register
c.
program counter
d. limit register
Twoja odpowiedź jest niepoprawna.
The correct answer is: base register (DATUM)

A program compiled for execution in paged memory can be executed in regular memory.
True
False
The correct answer is 'False'.

Page thrashing is a phenomenon involving:
Select one or more:
a.
frequent downloading of pages that have just been swapped out from memory
b. loading the same page over and over again
c.
frequent context changes that require page index tables to be reloaded
d. frequently changing the values of bits describing pages in frames
Twoja odpowiedź jest niepoprawna.
The correct answer is: frequent downloading of pages that have just been swapped out from memory

Semaphores are used to solve the problem:

a.
races
b. mutual exclusion
c.
process scheduling
d. Belady problem
The correct answer is: mutual exclusion

Dirty frame is:
Select one or more:
a.
modified
b. candidate to be swapped first
c.
read-only frame, tried to be written to
d. execute-only frame, tried to be read
Twoja odpowiedź jest poprawna.
The correct answer is: modified

The common allocation queue to fixed blocks of memory of equal size causes:
Select one or more:
a.
need for compaction
b. external fragmentation
c.
internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answer is: internal fragmentation

Which scheduler needs to make a decision the fastest?
a.
medium-term
b. long-term
c.
short-term
d. additional
The correct answer is: short-term

In operating system:
Select one or more:
a.
timer interrupt may not be handled
b. some exceptions are handled, some not
c.
the decision to handle an exception or not is made dynamically
d. every exception must be handled
Twoja odpowiedź jest poprawna.
The correct answer is: every exception must be handled

Static relocation is performed by:
a.
Linker
b. Compiler
c.
Segment descriptors
d. Paging system
The correct answers are: Compiler, Linker

Operation V on a raised binary semaphore:
Select one or more:
a.
Increases semaphore value by 1
b. It does not change the value of the semaphore
c.
It is stored in order to be able to perform as many operations P as there were V
Twoja odpowiedź jest poprawna.
The correct answer is: It does not change the value of the semaphore

Fragmentation is implied by:
Select one or more:
a.
Internal by partitioning into quantized blocks
b. External by resizing allocated blocks
c.
External by segmentation
d. Internal by paging
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 1.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a deallocation
order not reverse to allocation, External by resizing allocated blocks

A process can appear in the pool of scheduling processes as a result of:
Select one or more:
a.
Performing the P operation on the semaphore
b. Performing V operation on the semaphore
c.
Completing an I/O operation
d. Starting a new process
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

External fragmentation can be avoided by:
Select one or more:
a.

Freeing memory blocks in the reverse order to allocation
b. Freeing memory blocks in allocation order
c.
Application of the onion algorithm
d. Allocation of fixed size static memory blocks
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 1.
The correct answers are: Allocation of fixed size static memory blocks, Freeing memory blocks in the reverse order to allocation

The Test-And-Set or Compare-And-Swap instruction has the following characteristics:
Select one or more:
a.
It is possible to use only in 1-processor systems
b. It is possible to use only on computers with common memory
c.
Requires active waiting from tasks
d. It is possible to deadlock with TAS/CAS operations on multiple variables
Twoja odpowiedź jest poprawna.
The correct answers are: Requires active waiting from tasks, It is possible to use only on computers with common memory, It is possible to
deadlock with TAS/CAS operations on multiple variables

Using the Test-And-Set instruction in synchronization:
Select one or more:
a.
It requires processes to actively wait
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. Requires the use of semaphores
Twoja odpowiedź jest poprawna.
The correct answer is: It requires processes to actively wait

Address translation is handled by a unit called (give the abbreviation):
Answer:
MMU (Memory Management Unit)

The correct answer is: MMU

Dynamic relocation:
Select one or more:
a.
Requires hardware support in the form of a LIMIT register
b. Requires hardware support in the form of a DATUM register
c.
Allows for temporal elimination of external fragmentation
d. Requires relative references to be addressed when the program is loaded into memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external

fragmentation

pening a file in UNIX writes the following entries in the operating system's data structures:
Select one or more:
a.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new item into the Table of Open Files of the Process
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter
in an existing entry, Inserting a
new item into the Table of Open Files of the Process

What type of code can multiple processes execute simultaneously?
Select one or more:
a.
reentrant
b. dynamically relocated
c.
self-modifying
d. binary
Twoja odpowiedź jest poprawna.
The correct answer is: reentrant

Address translation aims to:
Select one or more:
a.
detecting the phenomenon of locality of references
b. converting a physical address to a virtual one
c.
Generating a "frame error" interrupt when the page is out of memory
d. converting a virtual address to a physical one
Twoja odpowiedź jest poprawna.
The correct answer is: converting a virtual address to a physical one

The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select one or more:
a.
SJF
b. time slicing
c.
priority
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answer is: SJF

nter-process communication can be organized using:

Select one or more:

a.
messages

b. shared directly addressable memory fields

c.
shared memory fields accessible through system calls

d. interrupts

Twoja odpowiedź jest poprawna.

The correct answers are: messages, shared directly addressable memory fields, shared memory fields accessible through system calls

Which of the following memory allocation schemes can cause external fragmentation?

a.
Multiple contiguous fixed partitions of equal size

b. Paging

c.
Sweeping

d. Multiple contiguous fixed partitions of various sizes

e.
Segmentation

The correct answers are: Segmentation, Sweeping

For concurrency in OS:

a.
timer interrupts are necessary

b. interrupt handling is necessary

c.
special processor support is required

d. cache memory is necessary

The correct answer is: interrupt handling is necessary

Which of the following information is stored on task switching?

a.
I/O status information

b. contents of general purpose registers, program counter, and similar registers available to the program

c.
Contents of the instruction register and similar registers

d. scheduler data

The correct answers are: I/O status information, scheduler data, contents of general purpose registers, program counter, and similar
registers available to the program

The conversion of the effective address to the physical one takes place:

Select one or more:

a.
in the bus arbiter

b. in the memory management unit

c.
in the arithmetic-logic unit

d. in the sequencer

Twoja odpowiedź jest poprawna.

The correct answer is: in the memory management unit

The logical address is also:
Select one or more:
a.
Relative address
b. Effective address
c.
Absolute address
d. Physical address
Twoja odpowiedź jest niepoprawna.
The correct answer is: Effective address

Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. Multithreaded applications cannot use multiprocessing.
c.
User-level threads can be synchronized by the kernel.
d. The threading implementation at the kernel level is done by the thread library attached to the program.
The correct answer is: Kernel-level threads require their descriptors in the kernel.

Address translation mechanism:
Select one or more:
a.
Concatenates the page number and page offset
b. Concatenates the frame number and offset on the page
c.
Adds the frame number to the page number
d. Concatenates the frame number and page number
Twoja odpowiedź jest poprawna.
The correct answer is: Concatenates the frame number and offset on the page

The effective address is also:
Select one or more:
a.
Logical address
b. Physical address
c.
Indirect address
d. Absolute address
Twoja odpowiedź jest poprawna.
The correct answer is: Logical address

Dynamic relocation is performed by:
a.
Loader
b. Linker
c.
Paging system
d. Special registers (DATUM)

The correct answers are: Special registers (DATUM), Paging system

What is included in the context that must be maintained for a synchronous precision interrupt?
Select one or more:
a.
instruction register
b. colletive or individual interrupt mask
c.
program counter
d. general purpose registers
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, colletive or individual interrupt mask

System/user threads:
Select one or more:
a.
User-level thread descriptors are stored in the address space of the program.
b. User-level threads share the same stack.
c.
User-level threads share the same execution context.
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 1.
The correct answers are: User-level thread descriptors are stored in the address space of the program., User-level threads share the same
execution context.

How is exception identification performed?
Select one or more:
a.
the specification of hardware interrupts and errors is given over the data bus
b. the specification of hardware interrupts is given over the data bus
c.
all exceptions are specified using the data bus
d. the specification of hardware interrupts and traps is given over the data bus
Twoja odpowiedź jest poprawna.
The correct answer is: the specification of hardware interrupts is given over the data bus

The combination of paging and segmentation consists in:
Select one or more:
a.
the use of a segment table or a pool of segment registers treated as an additional, superior level of
paging
b. Generating a "frame error" interrupt when the frame containing the page does not belong to the current
segment
c.
dividing pages into segments
d. identifying segments with pages

Dynamic relocation is performed by:

a.
Segment descriptors
b. Linker
c.
Loader
d. Compiler
The correct answer is: Segment descriptors

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Answer:
Thrashing

The correct answer is: anomaly

he hardware resources of a computer system are:
Select one or more:
a.
Primary memory
b. Windows on the screen
c.
Processor time
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Processor time, Primary memory, Peripheral devices

How does the operating system call the task completion subroutine?
3.recreates the context programmatically and executes the IRET instruction
2.sets the trace in the terminating subroutine to the current position
4.builds an interrupt vector on the system stack pointing to the terminating subroutine code
1.builds the frame of the terminating subroutine on the task stack
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 2.
The correct answer is: 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code, 2. → sets the trace
in the terminating subroutine to the current position, 4. → recreates the context programmatically and executes the IRET instruction, 1. →
builds the frame of the terminating subroutine on the task stack

What mechanism is part of time-sharing systems?
a.
short-term scheduler
b. swapping
c.
long-term scheduler
d. medium-term scheduler
The correct answer is: short-term scheduler

On UNIX, the number of files is directly limited by:
Select one or more:
a.
The number of bits of the disk address
b. The size of the space allocated for files

c.

I-node table size

d. The number of bits of the field describing the size of the file

e.

Allocation unit size

Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: I-node table size, The size of the space allocated for files

What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 2 processors

task1234

processing

time3.45.531.1

Answer:

4.3

The correct answer is: 4.3

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo

the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered

strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.::

the beginning of strip 0,1,2,3 looks like this:

01001Parity disk

11111Disk 3

10110Disk 2

10101Disk 1

01100Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odd.

Disk 3 has been corrupted and always reads 1. After replacing the disk with a new one, what values should be put in the strip on disk 3?

Answer:

1001

The correct answer is: 11001

Assuming memory cells are 1-byte, the page number in the address field is 12 bits, the offset is 12 bits, the frame number is 10 bits, and all

entries in the TIS page index table are on a 16-bit word boundary, enter:

- TIS maximum size of the program in kB

Answer:

16384

The correct answer is: 8

##

##

##############   File: Final Test2.txt #########

##

Interrupt vector:

Question 1Select all correct:

and.
contains the instruction counter, condition bits, interrupt mask, and general purpose registers

b.
it is saved automatically when an interrupt is accepted

c.
contains minimal information that cannot be saved programmatically

d.
contains the ID of the process that should be restarted

Feedback
Your answer is correct.

The correct answers are: it is saved automatically when an interrupt is accepted, contains minimal information that cannot be saved programmatically

In what states can a task occur?

Question 2Select all correct:

and.
ready

b.
current

c.
blocked

d.
resetted
Feedback
Your answer is correct.

The correct answers are: current, ready, blocked

Which of the following are affected by the thrashing phenomenon?

Question 3Answer

and.

program structure

b.
mass memory

c.
primary memory

d.
program size

Feedback
The correct answer is: primary memory

The kernel is _____ user-level threads.

Question 4Answer

and.
part

b.
creator.creator

c.
aware

d.
unaware

Feedback
The correct answer is: unaware

Indulgent scheduling is the best mechanism for:

Question 5Select all correct:

and.
real-time system

b.
system with many process classes

c.
time-sharing system

d.
everysystem

The interrupt acceptance sequence consists of (in the sequence):

Question 6Select all correct:

and.
identification of the interrupt level, saving the interrupt vector, performing a jump according to the interrupt table

b.
identification of the interrupt level, performing a jump according to the interrupt table, saving the interrupt vector

c.
identification of the interrupt level, saving the interrupt vector, performing a jump with a trace according to the interrupt table

d.
identification of the interrupt level, performing a jump with the trace according to the interrupt table, saving the interrupt vector

MMU uses index tables to:

Question 7Select all correct:

and.
generate an effective address

b.
generate a relative address

c.
generating a physical address

d.
generate a logical address

Feedback
Your answer is correct.

The correct answer is: generating a physical address

Which scheduler needs to make a decision the fastest?

Question 8Answer

and.
medium-term

b.
additional

c.
short-term

d.
long-term

Feedback
The correct answer is: short-term

The following paging exceptions allow for returning to the program after they occur:

Question 9Select all correct:

and.
interrupt on write (IOW)

b.
pagefault

c.
attempting to write to a write-protected frame

d.
attempt to read from the frame storing the code

Feedback
Your answer is correct.

The correct answers are: page fault, interrupt on write (IOW)

Which of the following memory allocation schemes causes external fragmentation?

Question 10Answer

and.
Multiple contiguous fixed partitions of various sizes

b.
Multiple contiguous fixed partitions of equal size

c.
Sweeping

d.
Paging

Feedback
The correct answers are: Sweeping, Multiple contiguous fixed partitions of various sizes

Discontinuous allocation:

Question 11Select all correct:

and.
increases internal fragmentation

b.
reduces external fragmentation

c.
reduces internal fragmentation

d.
increases external fragmentation

Feedback
Your answer is incorrect.

The correct answer is: reduces external fragmentation

Round-robin scheduling is the best mechanism for:

Question 12Select all correct:

and.
system with different classes of tasks

b.
time-sharing system

c.
everysystem

d.
real-time system

Feedback
Your answer is correct.

The correct answer is: time-sharing system

In a four-level page index table, the page number is:

Question 13Select all correct:

and.
in the first level table - the leftmost in the figure

b.
in the table of the last level - the rightmost in the figure

c.
part in the table of each level

d.
none of the above answers

Feedback
Your answer is incorrect.

The correct answer is: none of the above answers

Sequence of actions when starting a new task:
1.

Answer 1 Question 14
filling in the descriptor in the kernel

2.

Answer 2 Question 14
memory allocation if this is the first task of the program

3.

Answer 3 Question 14
initialize the stack, fill the first frame

4.

Answer 4 Question 14
instruction to transfer control to the task

Feedback
Your answer is correct.

The correct answer is: 1. → filling in the descriptor in the kernel, 2. → memory allocation if this is the first task of the program, 3. → initialize the stack, fill the first frame, 4. → instruction to transfer control to the task

Paging - two-level index tables mode of operation

Question 15Select all correct:

and.
The content of the level 1 table element is concatenated (combined) with the content of the level 2 table element

b.
The content of a level 1 table element is an index in a level 2 table

c.
The content of a level 1 table element points to a level 2 table

d.
The content of a level 1 table element points to a level 2 table

Feedback
Your answer is incorrect.

The correct answer is: The content of a level 1 table element points to a level 2 table

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Answer:Question 16
thrashing
Feedback
The correct answer is: anomalies

MMU uses index tables to:

Question 17Select all correct:

and.
generate a physical address

b.
generate a relative address

c.
generate an effective address

d.
generate a logical address

Feedback
Your answer is incorrect.

The correct answer is: generate a physical address

Using the Test-And-Set instruction in synchronization:

Question 18Select all correct:

and.
Stops the processor if 0 is read

b.
Requires organizing inactive waiting in queues

c.
Requires the use of semaphores

d.
It requires processes to actively wait

Feedback
Your answer is correct.

The correct answer is: It requires processes to actively wait

Physical address:

Question 19Select all correct:

and.
points to a location in the address space of primary memory

b.
points to a cell in the process address space

c.
indicates a relative address to the segment register

d.
is contained in the address field of the instruction

Feedback
Your answer is correct.

The correct answer is: points to a location in the address space of primary memory

What mechanism is part of batch systems?

Question 20Answer

and.
medium-tevel scheduler

b.
no scheduler is needed

c.
low-level scheduler

d.
high-level scheduler

Feedback
The correct answers are: high-level scheduler, medium-tevel scheduler

A process always transitions from the "user" state to the "system" state as a result of:

Question 21Select all correct:

and.
Process suspension

b.
A software interrupt that calls a system function

c.
Hardware interrupt

d.
Debugger trap

Feedback
Your answer is partially correct.

You correctly selected: 1.
The correct answers are: A software interrupt that calls a system function, Debugger trap

What can happen when a job leaves the critical section and more than 1 task is waiting for the critical section?

Question 22Select all correct:

and.
active waiting for a critical section

b.
deadlock waiting for critical section

c.
starvation awaiting a critical section

d.
letting both tasks into the critical section

Feedback
Your answer is correct.

The correct answer is: starvation awaiting a critical section

In operating system:

Question 23Select all correct:

and.
the decision to handle an exception or not is made dynamically

b.
some exceptions are handled, some not

c.
timer interrupt may not be handled

d.
every exception must be handled

Feedback
Your answer is correct.

The correct answer is: every exception must be handled

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception is raised in system mode?

Question 24Select all correct:

and.
initializes the kernel system stack from the scratch

b.
switches to the next kernel system stack

c.
nothing special, it builds the context on the kernel system stack

d.
switches back to the application program stack

Feedback
Your answer is correct.

The correct answer is: nothing special, it builds the context on the kernel system stack

The direct resume rule means that:

Question 25Select all correct:

and.
The resuming process loses the critical region

b.
The resuming process applies for the critical region just like other processes waiting to enter the critical region

c.
The summing process gets a critical region after the resumed process exits the critical region

Feedback
Your answer is correct.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just like other processes waiting to enter the critical region

Is memory protection useless on a single-user system?

Question 26Answer
True
Falsehood
Feedback
The correct answer is "False".

The effective address is also:

Question 27Select all correct:

and.
Absolute address

b.
Physical address

c.
Logicaladdress

d.

Indirect address

The Test-And-Set or Compare-And-Swap instruction has the following characteristics:

Question 28Select all correct:

and.
Requires active waiting from tasks

b.
It is possible to use only on computers with common memory

c.
It is possible to deadlock with TAS/CAS operations on multiple variables

d.
It is possible to use only in 1-processor systems

A single-program system is one that, in principle :

Question 29Select all correct:

and.
Doesn't allow you to delete the program from memory (uses non-volatile memory)

b.
Requires static relocation

c.
Runs on a uniprocessor computer

d.
Allows for storing only one program in primary memory

Feedback
Your answer is correct.

The correct answer is: Allows for storing only one program in primary memory

What is this technique where the operating system gathers programs and data together before processing?

Question 30Answer

and.
Batch processing

b.
Real-time processing

c.
Interactive processing

d.
Distributed processing

Feedback
The correct answer is: Batch processing

The system stack must provide space for:

Question 31Select all correct:

and.
Processor registers in as many copies as there are interrupt lines +1

b.
Processor registers in as many copies as there are devices in the system +1

c.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

d.
CPU registers

Feedback

Your answer is correct.

The correct answer is: Processor registers in as many copies as there are interrupt lines +1

System/user threads:

Question 32Select all correct:

and.
System level thread descriptors are stored in the operating system kernel.

b.
User-level threads share the same stack.

c.
User-level threads share the same execution context.

Feedback
Your answer is correct.

The correct answers are: System level thread descriptors are stored in the operating system kernel.,
User-level threads share the same execution context.

By definition , a deadlock is a situation where:

Question 33Select all correct:

and.
any greater than zero number of processes are waiting for conditions that cannot be met

b.
at least two processes are waiting for conditions that cannot be met

c.
any greater than one number of processes are waiting for conditions that cannot be met

d.
exactly one process is waiting for a condition that cannot be met

Feedback
Your answer is correct.

The correct answer is: any greater than zero number of processes are waiting for conditions that cannot
be met

Allocation unit for file storage:

Question 34Answer

and.
it should be selected to match the characteristics of the data

b.
may differ between files in a partition

c.
may be a variable in a partition

d.
may vary between partitions

Feedback
The correct answer is: may vary between partitions

The common allocation queue to fixed blocks of memory of different sizes causes:

Question 35Select all correct:

and.
internal fragmentation

b.
external fragmentation

c.
need for compaction

Feedback
Your answer is correct.

The correct answers are: internal fragmentation, external fragmentation

Consider the following sequence of address references:

123, 215, 600, 1234, 76, 96.

If the page size is 100, the order of page references is as follows:

Question 36Answer

and.
0,2,6,12,0,0

b.
12,21,60,123,7,9

c.
1,2,6,12,0,0

d.
1,2,6,12

Feedback
The correct answer is: 1,2,6,12,0,0

In UNIX, access rights are attributes:

Question 37Select all correct:

and.
A directory entry for a file

b.
A special table specifying access rights

c.
User descriptor

d.
An entry in the I-node table

Feedback
Your answer is incorrect.

The correct answer is: An entry in the I-node table

In the four-level page index table, the frame number is:

Question 38Select all correct:

and.

part in the table of each level

b.
in the table of the last level - the rightmost in the figure

c.
in the first level table - the leftmost in the figure

d.
none of the above answers

Which of the following few common services can be partially provided by software other than the operating system?

Question 39Answer

and.
Running programs

b.
I/O operations

c.
Security and protection

d.
Manipulating the file system

Feedback
The correct answers are: Security and protection, Manipulating the file system

Memory partitioning into blocks of any size:

Question 40Select all correct:

and.
It implies external fragmentation

b.
It implies internal fragmentation

c.
It does not imply fragmentation

Feedback
Your answer is incorrect.

The correct answer is: It does not imply fragmentation

The number of tasks performed on the system in a given time is:

Question 41Select all correct:

and.
efficiency

b.
throughput

c.
utilization

d.
response time

The correct answer is: throughput

The sequence of actions in interrupt handling:

1.

2.

3.

4.

Feedback
Your answer is correct.

The correct answer is:
The sequence of actions in interrupt handling:

1.[saving a copy of the interrupt vector (PC and SR)]

2.[switching to system mode (modification of PC and status register)]

3.[programmatic context saving]

4. [switching to the system stack]

Scheduling disk access involves deciding on the following:

Question 43Answer

and.
the order in which disk access requests should be handled

b.
about the type of disks the system should have

c.
which drive should be used next

d.
about the physical location of the files

Feedback
The correct answer is: the order in which disk access requests should be handled

Which of the following information is stored on task switching?

Question 44Answer

and.
scheduler data

b.
I/O status information

c.
Contents of general purpose registers, program counter, and similar registers available to the program

d.
Contents of datum, limit and other registers inaccessible to the program

Feedback
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the program, Contents of general purpose registers, program counter, and similar registers available to the program

The hardware resources of a computer system are:

Question 45Select all correct:

and.
Virtual memory

b.
Windows on the screen

c.
Processor time

d.
Peripheral devioces

Feedback
Your answer is correct.

The correct answers are: Processor time , Peripheral devioces

Address translation is handled by a unit called (give the abbreviation):

Answer:Question 46
MMU
Feedback
The correct answer is: MMU

At the suspended state is a process that:

Question 47Select all correct:

and.
waits for an I/O operation to complete

b.
waits for a processor

c.
fills the processor idle time

d.
occupations and processor

Feedback
Your answer is correct.

The correct answer is: waits for an I/O operation to complete

Address translation mechanism:

Question 48Select all correct:

and.
adds the frame number to the page number

b.
concatenates the frame number and page number

c.
concatenates the frame number and offset on the page

d.
concatenates the page number and page offset

Feedback
Your answer is correct.

The correct answer is: concatenates the frame number and offset on the page

Address translation aims to:

Question 49Select all correct:

and.
detecting the phenomenon of locality of references

b.
converting a physical address to a virtual one

c.
Generating a "frame error" interrupt when the page is out of memory

d.
converting a virtual address to a physical one

Feedback
Your answer is incorrect.

The correct answer is: converting a virtual address to a physical one

In the "current" state, there is a process that:

Question 50Select all correct:

and.
waits for a processor

b.
fills the CPU idle time

c.
waits for an I/O operation to complete

d.
occupations and processor

Feedback
Your answer is correct.

The correct answer is: occupies a processor

In a FAT-based disk system, file size is directly limited by:

Question 51Select all correct:

and.
FAT table size

b.
Allocation unit size

c.
The number of bits of the field describing the size of the file

d.
The number of bits of the disk address

e.

The size of the disk space

On UNIX, the number of files is directly limited by:

Question 52Select all correct:

and.
FAT size

b.
The number of bits of the disk address

c.
Allocation unit size

d.
The number of bits of the field describing the size of the file

e.
The size of the space allocated for files

The program supervisor layer in the operating system has the following role:

Question 53Select all correct:

and.
Intercepts all program system calls and routes them to the appropriate layers

b.
Deals with the management of primary memory (memory allocation to programs)

c.
Runs programs

d.
Deals with buffering data written and read from mass memory

Feedback
Your answer is partially correct.

You chose correctly: 2.
The correct answers are: Intercepts all program system calls and routes them to the appropriate layers ,
Runs programs, Deals with the management of primary memory (memory allocation to programs)

The multi-level interrupt controller includes :

Question 54Select all correct:

and.
Individual interrupt mask

b.
Priority encoder

c.
The register of interrupt being serviced

d.
Collective interrupt mask

Feedback
Your answer is correct.

The correct answers are: Collective interrupt mask , Individual interrupt mask , Priority encoder

A concurrent system is one that, in principle :

Question 55Select all correct:

and.
It allows multiple programs/processes/threads to run physically simultaneously

b.
Requires the use of timer interrupts

c.
Allows multiple programs/processes/threads to run simultaneously or seemingly simultaneously

d.
It runs on a multiprocessor computer

Feedback
Your answer is incorrect.

The correct answer is: Allows multiple programs/processes/threads to run simultaneously or seemingly simultaneously

Address translation aims to:

Question 56Select all correct:

and.
Converting a virtual address to a physical one

b.
Detecting the phenomenon of locality of references

c.
Converting a physical address to a virtual one

d.
Generating a "frame error" interrupt when the page is out of memory

Feedback
Your answer is incorrect.

The correct answer is: Converting a virtual address to a physical one

Which swapping algorithms use the history of page references (when was it last used or in which time slices was it used)?

Question 57Select all correct:

and.
working set

b.
LRU

c.
clock

d.
LFU

e.
second chance

f.
no algorithm

g.
NRU

h.
FIFO

Feedback
Your answer is incorrect.

The correct answers are: second chance, LRU, LFU, working set

If the loader inserts a program with absolute addresses into a fixed address space, it is called:

Question 58Answer

and.
Dynamic loading

b.
Static relocation

c.
Static loading

d.
Dynamic relocation

Feedback
The correct answer is: Dynamic relocation

Static relocation is performed by:

and.
Loader

b.
Linker

c.
Paging system

d.
Special registers (DATUM)

Feedback
The correct answers are: Linker, Loader

What is a scheduler?

and.
the system process that allocates the processor

b.
memory allocation procedure

c.
procedure that schedules frame release in the page replace algorithm

d.
a kernel routine that selects a task to execute

Feedback
Your answer is correct.

The correct answer is: a kernel routine that selects a task to execute

What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 3 processors

task

1

2

3

4

processing time

3.2

6.2

2.7

1.6

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.::

the beginning of strip 0,1,2,3 looks like this:

0

1

0

0

1
Parity disk

1

1

1

1

1

Disk 3

1

0

1

1

0

Disk 2

1

0

1

0

1

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.

Disk 3 has been corrupted and always reads 1. After replacing the disk with a new one, what values should be put in the strip on disk 3?

Answer:Question 62
1, 1, 0, 1
Feedback
The correct answer is: 11001

Assuming memory cells are 1-byte, the page number in the address field is 12 bits, the offset is 12 bits, the frame number is 10 bits, and all entries in the TIS page index table are on a 16-bit word boundary, enter:

- the maximum size of the program's virtual memory in MB

Answer:Question 63
16
Feedback
The correct answer is: 2
###

###
##############   File: Test2 Den.txt #########
###
Question 1

A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Question 1Select one or more:

a.
swapping

b.
mapping

c.
sweeping

d.
paging

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: paging

Question 2

A multiprogram system is one that, in principle:

Question 2Select one or more:

a.
Requires dynamic relocation

b.

Requires relocation or equivalent mechanism

c.
It allows for storing many programs in primary memory

d.
It allows for running programs only one after another

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: It allows for storing many programs in primary memory, Requires relocation or equivalent mechanism
Question 3

Static relocation is performed by:

Question 3Answer

a.
Segment descriptors

b.
Paging system

c.
Special registers (DATUM)

d.
Loader

Feedback
The correct answer is: Loader
Question 4
Partially correct
Mark 0.50 out of 1.00
Flag question

The common allocation queue to fixed blocks of memory of different sizes causes:

Question 4Select one or more:

a.
external fragmentation

b.
need for compaction

c.
internal fragmentation

Question 5
Incorrect
Mark 0.00 out of 1.00
Flag question

On what system is it not worth using memory protection?

Question 5Answer

a.
Without OS

b.
One-user

c.
Not concurrent

d.
One-program

Question 6
Incorrect
Mark 0.00 out of 1.00
Flag question

Frame protection bits:

Question 6Select one or more:

a.
must be available for writing

b.
must be readable

c.
must be group readable

d.
must be available for group clear

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: must be available for writing
Question 7

The resources of the computer system are:

Question 7Select one or more:

a.
Peripheral devices

b.
Files

c.
Primary memory

d.
User programs

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Files
Question 8

Which of the following applies to user-level threads?

Question 8Answer

a.
User-level threads can themselves be multi-threaded.

b.
User-level threads cost no execution time in system mode.

c.
The organization of user-level threads is specific to the operating system.

d.
User-level threads require their descriptors in the kernel.

Question 9

The return from interrupt instruction:

Question 9Select one or more:

a.
restores the conditions register

b.
causes the processor to switch to a process other than the interrupted one

c.
restores the program counter

d.
restores the process stack

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: restores the program counter, restores the conditions register
Question 10
Partially correct
Mark 0.67 out of 1.00
Flag question

The hardware resources of a computer system are:

Question 10Select one or more:

a.
Peripheral devices

b.
Windows on the screen

c.
Primary memory

d.
Processor time

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answers are: Processor time, Primary memory, Peripheral devices
Question 11
Incorrect
Mark 0.00 out of 1.00
Flag question

After accepting an interrupt, the next interrupts are:

Question 11Select one or more:

a.
some blocked, some unblocked, developer decides

b.
partly blocked, partly unblocked, according to the level of the accepted interrupt

c.
unblocked

d.
blocked

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: blocked
Question 12
Incorrect
Mark 0.00 out of 1.00
Flag question

The root directory of the disk should be located:

Question 12Answer

a.
in a place hard-coded in the structures of the operating system

b.
in a place designated by the data structure in a fixed location on the disk

c.
at a fixed address in main memory

d.

in a permanent place on the disk

Question 13
Incorrect
Mark 0.00 out of 1.00
Flag question

"Soft" real-time system:

Question 13Select one or more:

a.
Guarantees interrupt handling time

b.
Guarantees average response time

c.
Guaranteed response time

Question 14

The sequence of actions in interrupt handling:

1.

2.

3.

4.

The sequence of actions in interrupt handling:

1.[saving a copy of the interrupt vector (PC and SR)]

2.[switching to system mode (modification of PC and status register)]

3.[programmatic context saving]

4.[switching to the system stack]

Question 15

The page reference and modification bits are used to:

Question 15Select one or more:

a.
address translation support

b.
checking whether the frame is empty or contains a page

c.
counting references for swapping optimization

d.
locality of references detection

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: counting references for swapping optimization
Question 16

The system stack must provide space for:

Question 16Select one or more:

a.
CPU registers

b.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

c.
Processor registers in as many copies as there are devices in the system +1

d.
Processor registers in as many copies as there are interrupt lines +1

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: Processor registers in as many copies as there are interrupt lines +1
Question 17

How does the operating system call the task completion subroutine?

1.

Answer 1 Question 17
builds the frame of the terminating subroutine on the task stack

4.

Answer 2 Question 17
recreates the context programmatically and executes the IRET instruction

3.

Answer 3 Question 17
builds an interrupt vector on the system stack pointing to the terminating subroutine code

2.

Answer 4 Question 17
sets the trace in the terminating subroutine to the current position

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: 1. → builds the frame of the terminating subroutine on the task stack, 4. → recreates the context programmatically and executes the IRET instruction, 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code, 2. → sets the trace in the terminating subroutine to the current position
Question 18
Incorrect
Mark 0.00 out of 1.00
Flag question

Virtual memory consists of:

Question 18Select one or more:

a.
primary memory and cloud storage

b.
primary and mass memory

c.
primary memory and cache

d.
cache memory and mass storage

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: primary and mass memory
Question 19
Incorrect
Mark 0.00 out of 1.00
Flag question

Effective address is:

Question 19Select one or more:

a.
indirect address

b.
relative address

c.
logical address

d.
physical address

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: logical address
Question 20
Incorrect
Mark 0.00 out of 1.00
Flag question

The multi-level interrupt controller includes:

Question 20Select one or more:

a.
Collective interrupt mask

b.
The register of interrupt being serviced

c.
Priority encoder

d.
Individual interrupt mask

Feedback

Question 21

Which scheduler needs to make a decision the fastest?

Question 21Answer

a.
medium-term

b.
additional

c.
long-term

d.
short-term

Feedback
The correct answer is: short-term
Question 22
Incorrect
Mark 0.00 out of 1.00
Flag question

The page reference and modification bits are used to:

Question 22Select one or more:

a.
Detection of locality of references

b.
Indication whether the frame is empty or contains a page

c.
Counting references to optimize exchanges

d.
Address translation support

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Counting references to optimize exchanges

Question 23

What mechanism is part of time-sharing systems?

Question 23Answer

a.
short-term scheduler

b.
long-term scheduler

c.
swapping

d.
medium-term scheduler

Feedback
The correct answer is: short-term scheduler
Question 24

Multiprogramming is a technique in which, as a rule:

Question 24Select one or more:

a.
is a memory allocation method by which a program is divided into equal parts

b.
only addresses that can be generated by the processor when performing calculations are used

c.
many programs can be stored in primary memory

d.
is a method of allocating processor time

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: many programs can be stored in primary memory
Question 25

In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:

Question 25Answer

a.
task management

b.
task sheduling

c.
task timetable management

d.
traffic control

Feedback
The correct answer is: task sheduling
Question 26
Partially correct
Mark 0.33 out of 1.00
Flag question

Onion algorithm:

Question 26Select one or more:

a.
Causes external fragmentation

b.
Causes internal fragmentation

c.
Reduces external fragmentation by aligning the allocation order with the process hierarchy

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: Causes internal fragmentation, Causes external fragmentation, Reduces external fragmentation by aligning the allocation order with the process hierarchy
Question 27
Incorrect
Mark 0.00 out of 1.00
Flag question

If the loader inserts a program with absolute addresses into a fixed address space, it is called:

Question 27Answer

a.
Static relocation

b.
Static loading

c.
Dynamic loading

d.
Dynamic relocation

Feedback
The correct answer is: Dynamic relocation
Question 28

In which swapping algorithms is the M bit value used?

Question 28Select one or more:

a.
no algorithm

b.
clock

c.
LFU

d.
second chance

e.
working set

f.
LRU

g.
FIFO

h.

NRU

i.
optimal

Question 29

When is the scheduler called?

Question 29Select one or more:

a.
when the scheduler decides itself

b.
at the end of the execution of each kernel procedure

c.
at the start of execution of each kernel procedure

d.
at the request of a user task

Question 30
Incorrect
Mark 0.00 out of 1.00
Flag question

Memory partitioning into blocks of any size:

Question 30Select one or more:

a.
It implies internal fragmentation

b.
It does not imply fragmentation

c.
It implies external fragmentation

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: It does not imply fragmentation
Question 31
Incorrect
Mark 0.00 out of 1.00
Flag question

Dynamic relocation:

Question 31Select one or more:

a.
Requires hardware support in the form of a DATUM register

b.
Requires hardware support in the form of a LIMIT register

c.
Requires relative references to be addressed when the program is loaded into memory

d.
Allows for temporal elimination of external fragmentation

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external fragmentation
Question 32

Physical address:

Question 32Select one or more:

a.
points to a location in the address space of primary memory

b.
points to a cell in the process address space

c.
indicates a relative address to the segment register

d.
is contained in the address field of the instruction

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: points to a location in the address space of primary memory
Question 33

The page index table address is stored in:

Question 33Select one or more:

a.
page register

b.
page table base register

c.
instruction pointer

d.
segment base register

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: page table base register
Question 34

The combination of paging and segmentation consists in:

Question 34Select one or more:

a.
the use of a segment table or a pool of segment registers treated as an additional, superior level of paging

b.
dividing pages into segments

c.
identifying segments with pages

d.
Generating a "frame error" interrupt when the frame containing the page does not belong to the current

segment

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: the use of a segment table or a pool of segment registers treated as an additional, superior level of paging
Question 35
Partially correct
Mark 0.50 out of 1.00
Flag question

Two successive executions of operation V in one process on a binary semaphore in down state:

Question 35Select one or more:

a.
Increases semaphore value by 2

b.
Raises the semaphore if there are no suspended processes

c.
It doesn't change anything

d.
If the semaphore guards a critical region, it can lets two processes enter the critical region

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the semaphore if there are no suspended processes
Question 36
Partially correct
Mark 0.50 out of 1.00
Flag question

Which of the following memory allocation schemes causes external fragmentation?

Question 36Answer

a.
Sweeping

b.
Multiple contiguous fixed partitions of equal size

c.
Multiple contiguous fixed partitions of various sizes

d.
Paging

Feedback
The correct answers are: Sweeping, Multiple contiguous fixed partitions of various sizes
Question 37

A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Question 37Select one or more:

a.
swapping

b.
mapping

c.
paging

d.
fragmentation

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: paging
Question 38

In UNIX, the disk contains the following areas:

Question 38Select one or more:

a.
Directories

b.
I-node table

c.
Files data

d.
SuperBlock

The correct answers are: SuperBlock, I-node table, Files data
Question 39

The process context includes:

Question 39Select one or more:

a.
General purpose registers

b.
Process descriptor

c.
External devices registers

d.
The content of the file containing the program

The correct answers are: General purpose registers, Process descriptor
Question 40

In the case of hardware interrupt summation ("wire or"):

Question 40Select one or more:

a.
the bus driver can poll devices about issuing an interrupt

b.
the interrupt source is identified by a special bus signal

c.
the processor can programatically poll devices about issuing an interrupt

d.
the interrupt circuit can query devices about issuing an interrupt

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: the processor can programatically poll devices about issuing an interrupt, the bus driver can poll devices about issuing an interrupt
Question 41
Incorrect
Mark 0.00 out of 1.00
Flag question

Discontinuous allocation is the result of:

Question 41Select one or more:

a.
compaction

b.
relocation

c.
paging

d.
segmantation

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: paging, segmantation
Question 42

Static relocation is performed by:

Question 42Answer

a.
Linker

b.
Paging system

c.
Special registers (DATUM)

d.
Segment descriptors

Question 43

The number of condition variables is by definition in the monitor:

Question 43Select one or more:

a.
one

b.
as many as there are different conditions for the continuation of processes plus one for mutual exclusion

c.
as many as there are different conditions for the continuation of processes

d.
two

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: as many as there are different conditions for the continuation of processes
Question 44
Incorrect
Mark 0.00 out of 1.00
Flag question

In a four-level page index table, the page number is:

Question 44Select one or more:

a.
in the first level table - the leftmost in the figure

b.
in the table of the last level - the rightmost in the figure

c.
part in the table of each level

d.

none of the above answers

Question 45
Partially correct
Mark 0.50 out of 1.00
Flag question

What does the file system layer do?

Question 45Answer

a.
Manages remote file systems

b.
Manages files

c.
Manages remote files

d.
Tracks the status of information

Feedback
The correct answers are: Tracks the status of information, Manages files
Question 46
Incorrect
Mark 0.00 out of 1.00
Flag question

On UNIX, the number of files is directly limited by:

Question 46Select one or more:

a.
The size of the space allocated for files

b.
The number of bits of the field describing the size of the file

c.
Allocation unit size

d.
I-node table size

e.
The number of bits of the disk address

The correct answers are: I-node table size, The size of the space allocated for files
Question 47
Incorrect
Mark 0.00 out of 1.00
Flag question

Opening a file in UNIX writes the following entries in the operating system's data structures:

Question 47Select one or more:

a.
Inserting a new item into the Table of Open Files of the Process

b.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

c.
Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry, Inserting a new item into the Table of Open Files of the Process
Question 48

Which of the following facilities or abilities are required to provide mutual exclusion support?

Question 48Select one or more:

a.
The relative speeds of the tasks must be taken into account.

b.
A task that is performed outside the critical section must not affect the behavior of a task in the critical section.

c.

The task stays in its critical section only for a finite amount of time.

d.
Task scheduling must be considered.

The correct answers are: A task that is performed outside the critical section must not affect the behavior of a task in the critical section., The task stays in its critical section only for a finite amount of time.
Question 49
Incorrect
Mark 0.00 out of 1.00
Flag question

Page thrashing is a phenomenon involving:

Question 49Select one or more:

a.
frequent downloading of pages that have just been swapped out from memory

b.
loading the same page over and over again

c.
frequent context changes that require page index tables to be reloaded

d.
frequently changing the values of bits describing pages in frames

The correct answer is: frequent downloading of pages that have just been swapped out from memory
Question 50

Threads in operating system:
Question 50Select one or more:

a.
They share context except registers and stack

b.
They share context except stack

c.
They share the entire context

The correct answer is: They share context except registers and stack
Question 51

What paging element is NOT used in real-time systems?

Question 51Select one or more:

a.
page swapping

b.
protection bits

c.
address translation

d.
reference bits

The correct answer is: page swapping
Question 52

What does the kernel do when there is no task (process) to run?

Question 52Select one or more:

a.
switches off the power supply

b.
executes an infinite loop in the kernel until a task arrives

c.
resets the entire system

d.
starts the idle task

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: starts the idle task
Question 53

The resources of the computer system are:

Question 53Select one or more:

a.
User programs

b.
Peripheral devices

c.
Primary memory

d.
Processor time

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Processor time
Question 54
Partially correct
Mark 0.50 out of 1.00
Flag question

The direct resume rule means that:

Question 54Select one or more:

a.
The resuming process gets a critical region after the resumed process exits the monitor

b.
The resuming process applies for the critical region just like other processes on monitor input

c.
The resuming process loses the critical region
Proces wznawiający traci region krytyczny

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: The resuming process loses the critical regionProces wznawiający traci region krytyczny, The resuming process applies for the critical region just like other processes on monitor input
Question 55
Incorrect
Mark 0.00 out of 1.00
Flag question

By definition, a deadlock is a situation where:

Question 55Select one or more:

a.
any greater than one number of processes are waiting for conditions that cannot be met

b.
at least two processes are waiting for conditions that cannot be met

c.
any greater than zero number of processes are waiting for conditions that cannot be met

d.
exactly two processes are waiting for conditions that cannot be met

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: any greater than zero number of processes are waiting for conditions that cannot be met
Question 56

What is true about system level threads?

Question 56Answer

a.
Thread switching does not require interaction with the operating system.

b.
All process threads share the same address space.

c.
.All threads of the process must execute on the same processor.

d.
All process threads can share the same set of open files.

Feedback
The correct answers are: All process threads can share the same set of open files., All process threads

share the same address space.
Question 57

The environment in which the process is executed includes:

Question 57Select one or more:

a.
Process address space

b.
A set of environment variables

c.
General purpose registers content

d.
Contents of the interrupt request register

e.
The content in the memory management unit

f.
Open files

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: A set of environment variables, Process address space, General purpose
registers content, Open files
Question 58

In a concurrent environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:

Question 58Answer

a.
task scheduling

b.
task management

c.

traffic management

d.
task timetable planning

Question 59

What mechanism is part of batch systems?

Question 59Answer

a.
short-term scheduler

b.
medium-term scheduler

c.
no scheduler is needed

d.
long-term scheduler

Question 60

What is a scheduler?

Question 60Select one or more:

a.
memory allocation procedure

b.
a kernel routine that selects a task to execute

c.
procedure that schedules frame release in the page replace algorithm

d.
the system process that allocates the processor

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: a kernel routine that selects a task to execute
Question 61
Correct
Mark 5.00 out of 5.00
Flag question

What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 4 processors

task

1

2

3

4

processing time

3.6

5.6

2.8

1.7

Answer:Question 61
3.425
Feedback
The correct answer is: 3.4
Question 62
Incorrect
Mark 0.00 out of 5.00
Flag question

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:
1

1

1

0

0

Parity disk

1

1

1

1

1

Disk 3

1

0

0

1

0

Disk 2

1

1

0

0

1

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 even.

Disk 3 has been corrupted and always reads 1. After replacing the disk with a new one, what values should I put in the strip on disk 3?

Answer:Question 62
1
Feedback
The correct answer is: 11011
Question 63
Correct
Mark 5.00 out of 5.00
Flag question

The virtual address consists of 8b page number and 8b offset. The page index table is shown below (index, content). For decimal address 1928, binary 0000 0111 1000 1000, enter the physical address in the form: frame number.offset (as decimal numbers, offset in 3 digits). For example, for a physical address consisting of frame 0 and offset 18, specify 0.018. If there is no physical address for the given virtual address, then -1 should be specified.

7

12

6

0

5

-1

4

4

3

9

2

5

1

-1

0

2

Answer:Question 63
12.136
Feedback
The correct answer is: 12.136
##

##
###############   File: exam1_review.txt #########
##
Consider the following sequence of address references:

123, 215, 600, 1234, 76, 96.

If the page size is 100, the order of page references is as follows:
Question 1Answer
a.1,2,6,12
b.1,2,6,12,0,0
c.12,21,60,123,7,9
d.0,2,6,12,0,0
Feedback
The correct answer is: 1,2,6,12,0,0
==
=======
Interrupt vector:
a.contains the ID of the process that should be restarted
b.it is saved automatically when an interrupt is accepted
c.contains the instruction counter, condition bits, interrupt mask, and general purpose registers
d.contains minimal information that cannot be saved programmatically
Feedback
The correct answers are: it is saved automatically when an interrupt is accepted, contains minimal
information that cannot be saved programmatically
==
=======
Individual interrupt mask:
a.register in which addresses of devices reporting individual interrupts are stored
b.a register whose bits are ANDed (conjunction) with the bits from the interrupt request register
c.a register whose bits are ORed (alternative) with the bits from the interrupt request register
d.a combinational circuit that calculates the number of the interrupt received
The correct answer is: a register whose bits are ANDed (conjunction) with the bits from the interrupt
request register
==
=======
Frame access bits (reference and modification):

Question 4Select one or more:

a.
must be readable

b.
must be available for writing

c.

must be group readable

d.
must be available for group clear

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: must be readable, must be available for group clear, must be group readable
===
=======
Having two-level page index tables:

Question 5Select one or more:

a.
the content of a level I table element is an index in a level II table

b.
the content of the level I table element is concatenated (combined) with the content of the level II table element

c.
the content of a level I table element points to a level II table

d.
the content of a level I table element is added to the content of a level II table element

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: the content of a level I table element points to a level II table
===
=======
In the philosophers problem, if there are 4 of them:

Question 6Select one or more:

a.
Starvation is possible

b.
Deadlock is not possible

c.
Starvation is not possible

d.

Deadlock is possible

The correct answers are: Deadlock is possible, Starvation is not possible
==
=======
The program supervisor layer in the operating system has the following role:

Question 7Select one or more:

a.
Intercepts all program system calls and routes them to the appropriate layers

b.
Runs programs

c.
Deals with the management of primary memory (memory allocation to programs)

d.
Deals with buffering data written and read from mass memory

The correct answers are: Intercepts all program system calls and routes them to the appropriate layers,
Runs programs, Deals with the management of primary memory (memory allocation to programs)
==
=======
The return from interrupt instruction:

Question 8Select one or more:

a.
restores the conditions register

b.
causes the processor to switch to a process other than the interrupted one

c.
restores the program counter

d.
restores the process stack

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: restores the program counter, restores the conditions register
==
=======
Address translation mechanism:

Question 9Select one or more:

a.
Adds the frame number to the page number

b.
Concatenates the frame number and page number

c.
Concatenates the page number and page offset

d.
Concatenates the frame number and offset on the page

The correct answer is: Concatenates the frame number and offset on the page
==
=======
Using the Test-And-Set instruction in synchronization:

Question 10Select one or more:

a.
Requires an explicit relinquishment of the processor to another process

b.
Requires organizing inactive waiting in queues

c.
Stops the processor if 0 is read

d.
It requires processes to actively wait

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: It requires processes to actively wait

==

=======

In what states can a task occur?

Question 11Select one or more:

a.
current

b.
ready

c.
blocked

d.
resetted
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: current, ready, blocked
==
=======
What does the file system layer do?

Question 12Answer

a.
Manages remote files

b.
Tracks the location of the data

c.
Manages remote file systems

d.
Keeps track of how information is recorded

Feedback
The correct answers are: Keeps track of how information is recorded, Tracks the location of the data
==
=======
Indulgent scheduling is the best mechanism for:

Question 13Select one or more:

a.
system with many process classes

b.
real-time system

c.
time-sharing system

d.
every system

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: real-time system
==
=======
Inter-process communication can be organized using:

Question 14Select one or more:

a.
interrupts

b.
shared directly addressable memory fields

c.
shared memory fields accessible through system calls

d.
messages

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: messages, shared directly addressable memory fields, shared memory fields accessible through system calls
==
=======
There are three processes in the system:

C - calculation process (batch process performing complex calculations lasting several hours),
T - text editor (user edits text document)
K - compiler (the user compiles the program, e.g. in C++).
Assign processes to priorities in the operating system from the highest to the lowest priority.

highest Blank 1 Question 15
T

intermediate Blank 2 Question 15

K

lowest Blank 3 Question 15
C

The correct answer is:
There are three processes in the system:

C - calculation process (batch process performing complex calculations lasting several hours),
T - text editor (user edits text document)
K - compiler (the user compiles the program, e.g. in C++).
Assign processes to priorities in the operating system from the highest to the lowest priority.

highest [T]

intermediate [K]

lowest [C]

===
=======
What mechanism is part of batch systems?

Question 16Answer

a.
no scheduler is needed

b.
low-level scheduler

c.
medium-tevel scheduler

d.
high-level scheduler

Feedback
The correct answers are: high-level scheduler, medium-tevel scheduler
Q==
=========
Which of the following memory allocation schemes causes external fragmentation?

Question 17Answer

a.
Multiple contiguous fixed partitions of various sizes

b.
Multiple contiguous fixed partitions of equal size

c.
Paging

d.
Segmentation

Feedback
The correct answers are: Segmentation, Multiple contiguous fixed partitions of various sizes
Q==
=========
Allocation unit for file storage:

Question 18Answer

a.
may differ between files in a partition

b.
may be a variable in a partition

c.
may vary between partitions

d.
it should be selected to match the characteristics of the data

Feedback
The correct answer is: may vary between partitions
Q==
=========
For concurrency in OS:

Question 19Answer

a.
special processor support is required

b.
cache memory is necessary

c.
interrupt handling is necessary

d.
timer interrupts are necessary

Q==
=========
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:

Question 20Answer

a.
task sheduling

b.
traffic control

c.
task timetable management

d.
task management

Q==
=========
The result of cooperation of concurrent processes:

Question 21Select one or more:

a.
it is always deterministic

b.
it may depend on how processes are scheduled

c.
it can be non-deterministic
Q==
=========
At the blocked state is a process that:

Question 22Select one or more:

a.
waits for an I/O operation to complete

b.
occupies a processor

c.
fills the processor idle time

d.
waits for a processor

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: waits for an I/O operation to complete
Q===
=========
A multiprogram system is one that, in principle:

Question 23Select one or more:

a.
It allows for storing many programs in primary memory

b.
It allows for running programs only one after another

c.
Requires relocation or equivalent mechanism

d.
Requires dynamic relocation

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: It allows for storing many programs in primary memory, Requires relocation or equivalent mechanism
===
=======
In UNIX, access rights are specified:

Question 24Select one or more:

a.
At the same time, for all files in a given directory owned by the user

b.
Individually for each file

c.
Separately for the user, the group to which the user belongs and for all others

d.
Separately for write, read and execute/search

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Individually for each file, Separately for the user, the group to which the user belongs and for all others, Separately for write, read and execute/search
==
=======
In the "current" state, there is a process that:

Question 25Select one or more:

a.
waits for an I/O operation to complete

b.
fills the CPU idle time

c.
occupies a processor

d.
waits for a processor

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: occupies a processor
==
=======
The address translation function is:

Question 26Select one or more:

a.
monotonic

b.
multivalent

c.
partial

d.
reverse

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: multivalent, partial
==
=======
The interrupt encoder is:

Question 27Select one or more:

a.
a combinational circuit that transmits to the processor the number of the interrupt to be serviced

b.
a combinational circuit that computes the number of the reported and unmasked interrupt with the highest priority

c.
a register that tells the processor the interrupt number to be handled

d.
a combinational circuit that calculates the value of a new individual interrupt mask

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: a combinational circuit that computes the number of the reported and unmasked interrupt with the highest priority, a combinational circuit that calculates the value of a new individual interrupt mask, a combinational circuit that transmits to the processor the number of the interrupt to be serviced
==
=======
The segment descriptor table contains:

Question 28Select one or more:

a.
addresses of all segment page index tables

b.
address of the segment page index table of the bottom-level (last level) in the hierarchy

c.

address of the segment page index table of the top-level (first level) in the hierarchy

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: address of the segment page index table of the top-level (first level) in the hierarchy
===
=======
Which of the following statements is true for system level threads?

Question 29Answer

a.
User-level threads can be synchronized by the kernel.

b.
Kernel-level threads require their descriptors in the kernel.

c.
Multithreaded applications cannot use multiprocessing.

d.
The threading implementation at the kernel level is done by the thread library attached to the program.

Feedback
The correct answer is: Kernel-level threads require their descriptors in the kernel.
===
=======
In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:

Question 30Select one or more:

a.
The number of bits of the disk address

b.
Allocation unit size

c.
The number of bits of the field describing the size of the file

d.
FAT table size

e.
The size of the disk space

The correct answers are: FAT table size, The size of the disk space
===
=======
Dynamic relocation is performed by:

Question 31Answer

a.
Segment descriptors

b.
Compiler

c.
Linker

d.
Loader

The correct answer is: Segment descriptors
Q==
=========
Compaction uses the mechanism:

Question 32Select one or more:

a.
deleting segments from memory

b.
dynamic relocation

c.
paging

d.
static relocation

The correct answer is: dynamic relocation
===
=======
Page Index Table address is kept in:

Question 33Select one or more:

a.
page table base register

b.
program counter

c.
stack pointer

d.
page register

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: page table base register
===
=======
The program must be specially compiled to run in paged memory.

Question 34Answer
True
False
Feedback
The correct answer is 'False'.
===
=======
The microkernel of the operating system performs the following role:

Question 35Select one or more:

a.
Runs programs

b.
Synchronizes processes

c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other layers of the system
==
=======
The sweeping mechanism consists in:

Question 36Select one or more:

a.
Moving programs around in memory to eliminate fragmentation

b.
Loading pages into the primary memory and sending them to the disk

c.
Loading segments into primary memory and sending them to disk

d.
Merging adjacent free memory blocks

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Loading segments into primary memory and sending them to disk
Q===
=========
Swap area is placed in:

Question 37Answer

a.
Primary memory

b.
Index tables

c.
Virtual memory

d.
Mass memory

Feedback
The correct answer is: Mass memory

==
=======

How does the operating system call the task completion subroutine?

1.

Answer 1 Question 38
builds an interrupt vector on the system stack pointing to the terminating subroutine code

2.

Answer 2 Question 38
sets the trace in the terminating subroutine to the current position

3.

Answer 3 Question 38
builds the frame of the terminating subroutine on the task stack

4.

Answer 4 Question 38
recreates the context programmatically and executes the IRET instruction

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.
The correct answer is: 1. → builds the frame of the terminating subroutine on the task stack, 2. → sets the trace in the terminating subroutine to the current position, 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code, 4. → recreates the context programmatically and executes the IRET instruction
==
=======
Dynamic relocation is performed by:

Question 39Answer

a.
Loader

b.
Paging system

c.
Compiler

d.
Linker

Feedback
The correct answer is: Paging system
==
=======

MMU uses index tables to:

Question 40Select one or more:

a.
generate a logical address

b.
generate a physical address

c.
generate an effective address

d.
generate a relative address

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: generate a physical address
Qu==
==========
What paging element is NOT used in real-time systems?

Question 41Select one or more:

a.
address translation

b.
reference bits

c.
page swapping

d.
protection bits

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: page swapping
==
=======
When starting a program, how is control passed to it from the operating system?

Question 42Select one or more:

a.

jump

b.
extracode

c.
return from interrupt handler IRET

d.
jump with trace

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: return from interrupt handler IRET

==
======
A multiprogram system is one that, in principle:

Question 43Select one or more:

a.
It allows you to store many programs in mass memory

b.
It allows for storing many programs in primary memory

c.
Allows more than one program to run simultaneously

d.
It allows for running programs only one after another

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: It allows for storing many programs in primary memory
==
=======
Which technique was introduced because a single task could occupy both the CPU and I/O devices?

Question 44Select one or more:

a.
Interrupts

b.

Multiprogramming

c.
Preemptive scheduling

d.
Buffering

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Interrupts
==
=======
What are the functions of the kernel?

Question 45Answer

a.
Program management

b.
Memory management

c.
File management

d.
Interrupt handling

Feedback
The correct answer is: Interrupt handling
==
=======
Semaphores are used to solve the problem:

a.
races

b.
Belady problem

c.
process scheduling

d.

mutual exclusion

Feedback
The correct answer is: mutual exclusion
==
=======
Static relocation is performed by:

Question 47Answer

a.
Paging system

b.
Loader

c.
Special registers (DATUM)

d.
Linker

Feedback
The correct answers are: Linker, Loader
==
=======
The hardware mechanisms necessary for paging are

 (note: "frame error" is also called "page fault", "frame fault"):

Question 48Select one or more:

a.
Address translation, page index tables, page reference bits, "frame error" interrupt, associative memory

b.
Address translation, page index tables, "frame error" interrupt

c.
Address translation, page index tables, page reference bits, "frame error" interrupt

d.
Address translation, page index tables, "frame error" interrupt, associative memory, page swapper

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Address translation, page index tables, "frame error" interrupt
Q==

========
Allocation unit for file storage:

Question 49Answer

a.
may be a variable in a partition

b.
must be constant across the disk partition

c.
may differ between files on a partition

d.
It should be selected to match the characteristics of the data

Feedback
The correct answer is: must be constant across the disk partition
==
=======
What is this technique where the operating system gathers programs and data together before processing?

Question 50Answer

a.
Real-time processing

b.
Batch processing

c.
Interactive processing

d.
Distributed processing

Feedback
The correct answer is: Batch processing
==
=======
Page thrashing is a phenomenon involving:

Question 51Select one or more:

a.
frequent downloading of pages that have just been swapped out from memory

b.

frequent context changes that require page index tables to be reloaded

c.

loading the same page over and over again

d.

frequently changing the values of bits describing pages in frames

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answer is: frequent downloading of pages that have just been swapped out from memory
===
=======

Using the Test-And-Set instruction in synchronization:

Question 52Select one or more:

a.

It requires processes to actively wait

b.

Requires the use of semaphores

c.

Requires organizing inactive waiting in queues

d.

Stops the processor if 0 is read

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: It requires processes to actively wait
Q===
=========

The scheduler decisions take the form:

Question 53Select one or more:

a.

change from waiting to ready state

b.

change from active to ready state

c.
change from waiting to active state

d.
change from ready to active state

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: change from ready to active state
==
=======
Dynamic relocation is performed by:

Question 54Answer

a.
Segment descriptors

b.
Compiler

c.
Special registers (LIMIT)

d.
Paging system

Feedback
The correct answers are: Paging system, Segment descriptors
==
=======
Calling the program with the "exec" operation results in (accurately to the result of the exec operation):

Question 55Select one or more:

a.
Loading a code segment from disk, duplicating data segments and the calling process stack

b.
Loading code and data segments from disk, initializing a new stack segment

c.
Loading a code segment from disk, duplicating the data segment of the calling process

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: Loading code and data segments from disk, initializing a new stack segment

===
======
In operating system:

Question 56Select one or more:

a.
some exceptions are handled, some not

b.
timer interrupt may not be handled

c.
every exception must be handled

d.
the decision to handle an exception or not is made dynamically

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: every exception must be handled
===
======
The page fault exception is specific in that:

Question 57Select one or more:

a.
is reported in the "middle" of an instruction execution

b.
execution of the instruction may require decrementing the program counter

c.
continuation of the instruction execution may require the saving of internal processor registers storing intermediate values

d.
there is no return to the program from it

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.
The correct answers are: is reported in the "middle" of an instruction execution, execution of the instruction may require decrementing the program counter, continuation of the instruction execution may require the saving of internal processor registers storing intermediate values
Q===

=========
Twice consecutive execution in one process of operation P on a raised binary semaphore:

Question 58Select one or more:

a.
Decreases semaphore value by 2

b.
If a semaphore guards a critical region, it leads to a deadlock

c.
Causes the semaphore to get down

d.
It doesn't change anything

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: If a semaphore guards a critical region, it leads to a deadlock, Causes the semaphore to get down
==
=======
BEST-FIT algorithm:

Question 59Select one or more:

a.
Requires sorting the cut part into the list of free blocks

b.
Requires a descending sort of the list of free blocks

c.
It allows for quick determining whether there is a free block of the required size

d.
Avoids external fragmentation

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut part into the list of free blocks
==
=======
Which swapping algorithms use page reference history?

Question 60Select one or more:

a.
LRU

b.
LFU

c.
NRU

d.
working set

e.
second chance

f.
FIFO

g.
working set clock

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: LRU, LFU
===
=======
What is the average time in the system for tasks in the batch, using SJF algorithm?

task

1

2

3

4

processing time

3.4

6.4

2.7

1.1

===
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 13 bits, the frame number is 12 bits, and all entries in the TIS page index table are on a 32-bit word boundary, please enter:

- the maximum size of the program's physical memory in MB

===
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:

0

1

0

0

1
Parity disk

0

0

0

0

0

Disk 3

1

0

1

1

0

Disk 2

1

1

0

1

0

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odd.

Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?

Answer:Question 62
11111
Feedback
The correct answer is: 10110
##

##
############### File: DocumentTrf.txt #########
##
The process context includes:
a.Process descriptor
b.General purpose registers
c.The content of the file containing the program
d.External devices registers

The correct answers are: General purpose registers , Process descriptor
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
a.FCFS
b.S.J.F
c.time slicing
d.priority

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: SJF
Scheduler function is:
and.scheduling tasks on the processor
b.changing task priorities
c.selecting a task to run
d.counting the CPU time used by tasks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: selecting a task to run
What does the kernel do when there is no task (process) to run?
a.switches off the power supply
b.executes an infinite loop in the kernel until a task arrives
c.resets the entire system
d.starts the idle task

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: starts the idle task
With indulgent scheduling, once a CPU is allocated to a task, the task keeps it until:
a.transition a task from the active state to the ready state
b.releasing the processor by the task
c.task termination
d.transition a task from the ready state to the active state
The correct answers are: task termination, releasing the processor by the task
Imprecise interrupts are:
a.transferred in any state of the processor, not just between the execution of successive instructions
b.unblocked in any state of the processor, not just between executions of instructions
c.accepted in any state of the processor, not just between the execution of successive instructions
d.issued in any state of the processor, not just between the execution of successive instructions

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: accepted in any state of the processor, not just between the execution of
successive instructions
The following situations trigger "error" exceptions:
a.an attempt to execute an instruction from the area of   the page for which the "no code" bit was set
b.a reference to memory that is not in the program address space
c.memory reference in the area of   the page that is not in memory
d.memory reference beyond limit register value
The correct answers are: a reference to memory that is not in the program address space, memory
reference beyond limit register value, an attempt to execute an instruction from the area of   the page for
which the "no code" bit was set

Sequence of actions when starting a new task:

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: 1. → filling in the descriptor in the kernel, 2. → memory allocation if this is the first
task of the program, 3. → initialize the stack, fill the first frame, 4. →   instruction to transfer control to the
task

The scheduler decisions take the form:
a.change from active to ready state
b.change from ready to active state
c.change from waiting to ready state
d.change from ready to waiting state

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: change from ready to active state
Interrupt vector:
a.contains the ID of the process that should be restarted
b.it is saved automatically when an interrupt is accepted
c.contains minimal information that cannot be saved programmatically
d.contains the instruction counter, condition bits, interrupt mask, and general purpose registers
The correct answers are: it is saved automatically when an interrupt is accepted, contains minimal information that cannot be saved programmatically
By definition , a deadlock is a situation where:
a.any greater than one number of processes are waiting for conditions that cannot be met
b.exactly two processes are waiting for conditions that cannot be met
c.at least two processes are waiting for conditions that cannot be met
d.any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: any greater than zero number of processes are waiting for conditions that cannot be met
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception is raised in system mode?
a.switches to the next kernel system stack
b.switches back to the application program stack
c.nothing special, it builds the context on the kernel system stack
d.initializes the kernel system stack from the scratch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: nothing special, it builds the context on the kernel system stack
Interrupt mask:
a.can unblock interrupts when the interrupt handler completes
b.must be part of the status register
c.can be set and reset by special processor instructions
d.causes interrupts to be disabled when an interrupt is accepted
The correct answers are: causes interrupts to be disabled when an interrupt is accepted, can unblock interrupts when the interrupt handler completes, can be set and reset by special processor instructions
Scheduling aims to optimize:
a.reaction time
b.processor utilization
c.wait time
d.throughput system
The correct answers are: processor utilization, system throughput, wait time, reaction time
Which scheduler needs to make a decision the fastest?
a.short-term
b.long-term
c.additional
d.medium-term

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: short-term

What is true about system level threads?
a.All process threads can share the same set of open files.
b.All process threads share the same address space.
c.Thread switching does not require interaction with the operating system.
d.All process threads can share the same set of child processes.
Feedback
The correct answers are: All process threads can share the same set of open files., All process threads share the same address space., All process threads can share the same set of child processes.
What mechanism is part of time-sharing systems?
a.short-term scheduler
b.long-term scheduler
c.medium-term scheduler
d.swapping

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: short-term scheduler
Using the Test-And-Set instruction in synchronization:
a.Requires an explicit relinquishment of the processor to another process
b.Requires organizing inactive waiting in queues
c.It requires processes to actively wait
d.Stops the processor if 0 is read
Your answer is correct.

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: It requires processes to actively wait
In the "current" state, there is a process that:
a.fills the CPU idle time
b.waits for a processor
c.occupations and processor
d.waits for an I/O operation to complete

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: occupies a processor
There are three processes in the system:
C - calculation process (batch process performing complex calculations lasting several hours),
T - text editor (user edits text document)
K - compiler (the user compiles the program, eg in C++).
Assign processes to priorities in the operating system from the highest to the lowest priority.
highest [T]
intermediate [K]
lowest [C]
Which mechanism is a part of Time-sharing systems?
a.Short-Term Scheduler
b.no scheduler is needed
c.Medium-Term Scheduler
d.Long-Term Scheduler

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: Short-Term Scheduler
At the suspended state is a process that:
a.waits for a processor
b.fills the processor idle time
c.waits for an I/O operation to complete
d.occupations and processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

The correct answer is: waits for an I/O operation to complete

SJF selects the task:

a.with the least CPU requirement

b.which was last placed in the queue

c.who waited the longest in the queue

d.which was first placed in the queue

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

The correct answer is: with the least CPU requirement

How does the operating system call the task completion subroutine?

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

The correct answer is: 2. → sets the trace in the terminating subroutine to the current position, 4. →
  recreates the context programmatically and executes the IRET instruction, 3. → builds an interrupt
vector on the system stack pointing to the terminating subroutine code, 1. → builds the frame of the
terminating subroutine on the task stack

The multi-level interrupt controller includes :

a.Collective interrupt mask

b.The register of interrupt being serviced

c.Individual interrupt mask

d.Priority encoder

The correct answers are: Collective interrupt mask , Individual interrupt mask , Priority encoder

When is the scheduler called?

a.when the scheduler decides itself

b.at the end of the execution of each kernel procedure

c.at the request of a user task

d.at the start of execution of each kernel procedure

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

The correct answer is: at the end of the execution of each kernel procedure

Semaphores are used to solve the problem:

a.races

b.Belady problem

c.process scheduling

d.mutual exclusion

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

The correct answer is: mutual exclusion

The direct resume rule means that:

a.The resuming process applies for the critical region just like other processes on monitor input

b.The resuming process loses the critical region

The resuming process loses a critical region

c.The summarizing process gets a critical region after the resumed process exits the monitor

The correct answers are: The resuming process loses the critical region , The resuming process applies
for the critical region just like other processes on monitor input

Using the Test-And-Set instruction in synchronization:

a.Requires organizing inactive waiting in queues

b.It requires processes to actively wait

c.Requires the use of semaphores

d.Stops the processor if 0 is read

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

The correct answer is: It requires processes to actively wait

The result of cooperation of concurrent processes:

a.it is always deterministic
b.it may depend on how processes are scheduled
c.it can be non-deterministic
The correct answers are: it may depend on how processes are scheduled , it can be non-deterministic
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task
1
2
3
4
processing time
3.4
5.5
3
1.1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: 4.3

##

```
############################################################
##############   File: Ubaid Test2.txt #########
############################################################
```
Interrupt vector:

Question 1Select all correct:

and.
contains the instruction counter, condition bits, interrupt mask, and general purpose registers

b.
it is saved automatically when an interrupt is accepted

c.
contains minimal information that cannot be saved programmatically

d.
contains the ID of the process that should be restarted

Feedback
Your answer is correct.

The correct answers are: it is saved automatically when an interrupt is accepted, contains minimal information that cannot be saved programmatically

In what states can a task occur?

Question 2Select all correct:

and.
ready

b.
current

c.
blocked

d.
resetted
Feedback

Your answer is correct.

The correct answers are: current, ready, blocked

Which of the following are affected by the thrashing phenomenon?

Question 3Answer

and.
program structure

b.
mass memory

c.
primary memory

d.
program size

Feedback
The correct answer is: primary memory

The kernel is _____ user-level threads.

Question 4Answer

and.
part

b.
creator.creator

c.
aware

d.
unaware

Feedback
The correct answer is: unaware

Indulgent scheduling is the best mechanism for:

Question 5Select all correct:

and.

real-time system

b.
system with many process classes

c.
time-sharing system

d.
everysystem

Feedback
Your answer is correct.

The correct answer is: real-time system

The interrupt acceptance sequence consists of (in the sequence):

Question 6Select all correct:

and.
identification of the interrupt level, saving the interrupt vector, performing a jump according to the interrupt table

b.
identification of the interrupt level, performing a jump according to the interrupt table, saving the interrupt vector

c.
identification of the interrupt level, saving the interrupt vector, performing a jump with a trace according to the interrupt table

d.
identification of the interrupt level, performing a jump with the trace according to the interrupt table, saving the interrupt vector

Feedback
Your answer is incorrect.

The correct answer is: identifying of the interrupt level, saving the interrupt vector, performing a jump with a trace according to the interrupt table

MMU uses index tables to:

Question 7Select all correct:

and.

generate an effective address

b.
generate a relative address

c.
generating a physical address

d.
generate a logical address

Feedback
Your answer is correct.

The correct answer is: generating a physical address

Which scheduler needs to make a decision the fastest?

Question 8Answer

and.
medium-term

b.
additional

c.
short-term

d.
long-term

Feedback
The correct answer is: short-term

The following paging exceptions allow for returning to the program after they occur:

Question 9Select all correct:

and.
interrupt on write (IOW)

b.
pagefault

c.
attempting to write to a write-protected frame

d.
attempt to read from the frame storing the code

Feedback
Your answer is correct.

The correct answers are: page fault, interrupt on write (IOW)

Which of the following memory allocation schemes causes external fragmentation?

Question 10Answer

and.
Multiple contiguous fixed partitions of various sizes

b.
Multiple contiguous fixed partitions of equal size

c.
Sweeping

d.
Paging

Feedback
The correct answers are: Sweeping, Multiple contiguous fixed partitions of various sizes

Discontinuous allocation:

Question 11Select all correct:

and.
increases internal fragmentation

b.
reduces external fragmentation

c.
reduces internal fragmentation

d.

increases external fragmentation

Round-robin scheduling is the best mechanism for:

Question 12Select all correct:

and.
system with different classes of tasks

b.
time-sharing system

c.
everysystem

d.
real-time system

In a four-level page index table, the page number is:

Question 13Select all correct:

and.
in the first level table - the leftmost in the figure

b.
in the table of the last level - the rightmost in the figure

c.
part in the table of each level

d.
none of the above answers

Feedback
Your answer is incorrect.

The correct answer is: none of the above answers

Sequence of actions when starting a new task:
1.

Answer 1 Question 14
filling in the descriptor in the kernel

2.

Answer 2 Question 14
memory allocation if this is the first task of the program

3.

Answer 3 Question 14
initialize the stack, fill the first frame

4.

Answer 4 Question 14
instruction to transfer control to the task

Feedback
Your answer is correct.

The correct answer is: 1. → filling in the descriptor in the kernel, 2. → memory allocation if this is the first task of the program, 3. → initialize the stack, fill the first frame, 4. → instruction to transfer control to the task

Paging - two-level index tables mode of operation

Question 15Select all correct:

and.
The content of the level 1 table element is concatenated (combined) with the content of the level 2 table element

b.
The content of a level 1 table element is an index in a level 2 table

c.
The content of a level 1 table element points to a level 2 table

d.

The content of a level 1 table element points to a level 2 table

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Answer:Question 16
thrashing

MMU uses index tables to:

Question 17Select all correct:

and.
generate a physical address

b.
generate a relative address

c.
generate an effective address

d.
generate a logical address

Using the Test-And-Set instruction in synchronization:

Question 18Select all correct:

and.
Stops the processor if 0 is read

b.

Requires organizing inactive waiting in queues

c.
Requires the use of semaphores

d.
It requires processes to actively wait

Feedback
Your answer is correct.

The correct answer is: It requires processes to actively wait

Physical address:

Question 19Select all correct:

and.
points to a location in the address space of primary memory

b.
points to a cell in the process address space

c.
indicates a relative address to the segment register

d.
is contained in the address field of the instruction

Feedback
Your answer is correct.

The correct answer is: points to a location in the address space of primary memory

What mechanism is part of batch systems?

Question 20Answer

and.
medium-tevel scheduler

b.
no scheduler is needed

c.
low-level scheduler

d.
high-level scheduler

Feedback
The correct answers are: high-level scheduler, medium-tevel scheduler

A process always transitions from the "user" state to the "system" state as a result of:

Question 21Select all correct:

and.
Process suspension

b.
A software interrupt that calls a system function

c.
Hardware interrupt

d.
Debugger trap

Feedback
Your answer is partially correct.

You correctly selected: 1.
The correct answers are: A software interrupt that calls a system function, Debugger trap

What can happen when a job leaves the critical section and more than 1 task is waiting for the critical section?

Question 22Select all correct:

and.
active waiting for a critical section

b.
deadlock waiting for critical section

c.
starvation awaiting a critical section

d.
letting both tasks into the critical section

Feedback
Your answer is correct.

The correct answer is: starvation awaiting a critical section

In operating system:

Question 23Select all correct:

and.
the decision to handle an exception or not is made dynamically

b.
some exceptions are handled, some not

c.
timer interrupt may not be handled

d.
every exception must be handled

Feedback
Your answer is correct.

The correct answer is: every exception must be handled

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception is raised in system mode?

Question 24Select all correct:

and.
initializes the kernel system stack from the scratch

b.
switches to the next kernel system stack

c.
nothing special, it builds the context on the kernel system stack

d.
switches back to the application program stack

Feedback
Your answer is correct.

The correct answer is: nothing special, it builds the context on the kernel system stack

The direct resume rule means that:

Question 25Select all correct:

and.
The resuming process loses the critical region

b.
The resuming process applies for the critical region just like other processes waiting to enter the critical region

c.
The summing process gets a critical region after the resumed process exits the critical region

Feedback
Your answer is correct.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just like other processes waiting to enter the critical region

Is memory protection useless on a single-user system?

Question 26Answer
True
Falsehood
Feedback
The correct answer is "False".

The effective address is also:

Question 27Select all correct:

and.
Absolute address

b.
Physical address

c.
Logicaladdress

d.
Indirect address

Feedback
Your answer is correct.

The correct answer is: Logical address

The Test-And-Set or Compare-And-Swap instruction has the following characteristics:

Question 28Select all correct:

and.
Requires active waiting from tasks

b.
It is possible to use only on computers with common memory

c.
It is possible to deadlock with TAS/CAS operations on multiple variables

d.
It is possible to use only in 1-processor systems

Feedback
Your answer is correct.

The correct answers are: Requires active waiting from tasks, It is possible to use only on computers with common memory, It is possible to deadlock with TAS/CAS operations on multiple variables

A single-program system is one that, in principle :

Question 29Select all correct:

and.
Doesn't allow you to delete the program from memory (uses non-volatile memory)

b.
Requires static relocation

c.
Runs on a uniprocessor computer

d.
Allows for storing only one program in primary memory

Feedback
Your answer is correct.

The correct answer is: Allows for storing only one program in primary memory

What is this technique where the operating system gathers programs and data together before processing?

Question 30Answer

and.
Batch processing

b.
Real-time processing

c.
Interactive processing

d.
Distributed processing

Feedback
The correct answer is: Batch processing

The system stack must provide space for:

Question 31Select all correct:

and.
Processor registers in as many copies as there are interrupt lines +1

b.
Processor registers in as many copies as there are devices in the system +1

c.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

d.
CPU registers

Feedback
Your answer is correct.

The correct answer is: Processor registers in as many copies as there are interrupt lines +1

System/user threads:

Question 32Select all correct:

and.
System level thread descriptors are stored in the operating system kernel.

b.
User-level threads share the same stack.

c.
User-level threads share the same execution context.

Feedback
Your answer is correct.

The correct answers are: System level thread descriptors are stored in the operating system kernel., User-level threads share the same execution context.

By definition , a deadlock is a situation where:

Question 33Select all correct:

and.
any greater than zero number of processes are waiting for conditions that cannot be met

b.
at least two processes are waiting for conditions that cannot be met

c.
any greater than one number of processes are waiting for conditions that cannot be met

d.
exactly one process is waiting for a condition that cannot be met

Feedback
Your answer is correct.

The correct answer is: any greater than zero number of processes are waiting for conditions that cannot be met

Allocation unit for file storage:

Question 34Answer

and.
it should be selected to match the characteristics of the data

b.
may differ between files in a partition

c.
may be a variable in a partition

d.
may vary between partitions

Feedback
The correct answer is: may vary between partitions

The common allocation queue to fixed blocks of memory of different sizes causes:

Question 35Select all correct:

and.
internal fragmentation

b.
external fragmentation

c.
need for compaction

Feedback
Your answer is correct.

The correct answers are: internal fragmentation, external fragmentation

Consider the following sequence of address references:

123, 215, 600, 1234, 76, 96.

If the page size is 100, the order of page references is as follows:

Question 36Answer

and.
0,2,6,12,0,0

b.
12,21,60,123,7,9

c.
1,2,6,12,0,0

d.
1,2,6,12

Feedback
The correct answer is: 1,2,6,12,0,0

In UNIX, access rights are attributes:

Question 37Select all correct:

and.
A directory entry for a file

b.
A special table specifying access rights

c.
User descriptor

d.
An entry in the I-node table

Feedback
Your answer is incorrect.

The correct answer is: An entry in the I-node table

In the four-level page index table, the frame number is:

Select all correct:

and.
part in the table of each level

b.
in the table of the last level - the rightmost in the figure

c.
in the first level table - the leftmost in the figure

d.
none of the above answers

Which of the following few common services can be partially provided by software other than the operating system?

Answer

and.
Running programs

b.
I/O operations

c.
Security and protection

d.
Manipulating the file system

Feedback
The correct answers are: Security and protection, Manipulating the file system

Memory partitioning into blocks of any size:

Select all correct:

and.
It implies external fragmentation

b.
It implies internal fragmentation

c.
It does not imply fragmentation

Feedback
Your answer is incorrect.

The correct answer is: It does not imply fragmentation

The number of tasks performed on the system in a given time is:

Question 41Select all correct:

and.
efficiency

b.
throughput

c.
utilization

d.
response time

Feedback
Your answer is correct.

The correct answer is: throughput

The sequence of actions in interrupt handling:

1.

2.

3.

4.

Feedback

Your answer is correct.

The correct answer is:
The sequence of actions in interrupt handling:

1.[saving a copy of the interrupt vector (PC and SR)]

2.[switching to system mode (modification of PC and status register)]

3.[programmatic context saving]

4. [switching to the system stack]

Scheduling disk access involves deciding on the following:

Question 43Answer

and.
the order in which disk access requests should be handled

b.
about the type of disks the system should have

c.
which drive should be used next

d.
about the physical location of the files

Feedback
The correct answer is: the order in which disk access requests should be handled

Which of the following information is stored on task switching?

Question 44Answer

and.
scheduler data

b.
I/O status information

c.
Contents of general purpose registers, program counter, and similar registers available to the program

d.
Contents of datum, limit and other registers inaccessible to the program

The hardware resources of a computer system are:

Question 45Select all correct:

and.
Virtual memory

b.
Windows on the screen

c.
Processor time

d.
Peripheral devioces

Address translation is handled by a unit called (give the abbreviation):

Answer:Question 46
MMU

At the suspended state is a process that:

Question 47Select all correct:

and.
waits for an I/O operation to complete

b.
waits for a processor

c.
fills the processor idle time

d.
occupations and processor

Feedback
Your answer is correct.

The correct answer is: waits for an I/O operation to complete

Address translation mechanism:

Question 48Select all correct:

and.
adds the frame number to the page number

b.
concatenates the frame number and page number

c.
concatenates the frame number and offset on the page

d.
concatenates the page number and page offset

Feedback
Your answer is correct.

The correct answer is: concatenates the frame number and offset on the page

Address translation aims to:

Question 49Select all correct:

and.
detecting the phenomenon of locality of references

b.
converting a physical address to a virtual one

c.
Generating a "frame error" interrupt when the page is out of memory

d.
converting a virtual address to a physical one

Feedback
Your answer is incorrect.

The correct answer is: converting a virtual address to a physical one

In the "current" state, there is a process that:

Question 50Select all correct:

and.
waits for a processor

b.
fills the CPU idle time

c.
waits for an I/O operation to complete

d.
occupations and processor

Feedback
Your answer is correct.

The correct answer is: occupies a processor

In a FAT-based disk system, file size is directly limited by:

Question 51Select all correct:

and.
FAT table size

b.
Allocation unit size

c.

The number of bits of the field describing the size of the file

d.

The number of bits of the disk address

e.

The size of the disk space

Feedback
Your answer is partially correct.

You correctly selected: 1.
The correct answers are: The size of the disk space , The number of bits of the field describing the size of the file

On UNIX, the number of files is directly limited by:

Question 52Select all correct:

and.
FAT size

b.

The number of bits of the disk address

c.

Allocation unit size

d.

The number of bits of the field describing the size of the file

e.

The size of the space allocated for files

Feedback
Your answer is incorrect.

The correct answer is: The size of the space allocated for files

The program supervisor layer in the operating system has the following role:

Question 53Select all correct:

and.
Intercepts all program system calls and routes them to the appropriate layers

b.
Deals with the management of primary memory (memory allocation to programs)

c.
Runs programs

d.
Deals with buffering data written and read from mass memory

Feedback
Your answer is partially correct.

You chose correctly: 2.
The correct answers are: Intercepts all program system calls and routes them to the appropriate layers ,
Runs programs, Deals with the management of primary memory (memory allocation to programs)

The multi-level interrupt controller includes :

Question 54Select all correct:

and.
Individual interrupt mask

b.
Priority encoder

c.
The register of interrupt being serviced

d.
Collective interrupt mask

Feedback
Your answer is correct.

The correct answers are: Collective interrupt mask , Individual interrupt mask , Priority encoder

A concurrent system is one that, in principle :

Question 55Select all correct:

and.
It allows multiple programs/processes/threads to run physically simultaneously

b.
Requires the use of timer interrupts

c.
Allows multiple programs/processes/threads to run simultaneously or seemingly simultaneously

d.
It runs on a multiprocessor computer

Feedback
Your answer is incorrect.

The correct answer is: Allows multiple programs/processes/threads to run simultaneously or seemingly simultaneously

Address translation aims to:

Question 56Select all correct:

and.
Converting a virtual address to a physical one

b.
Detecting the phenomenon of locality of references

c.
Converting a physical address to a virtual one

d.
Generating a "frame error" interrupt when the page is out of memory

Feedback
Your answer is incorrect.

The correct answer is: Converting a virtual address to a physical one

Which swapping algorithms use the history of page references (when was it last used or in which time slices was it used)?

Question 57 Select all correct:

and.
working set

b.
LRU

c.
clock

d.
LFU

e.
second chance

f.
no algorithm

g.
NRU

h.
FIFO

Feedback
Your answer is incorrect.

The correct answers are: second chance, LRU, LFU, working set

If the loader inserts a program with absolute addresses into a fixed address space, it is called:

Question 58 Answer

and.
Dynamic loading

b.
Static relocation

c.
Static loading

d.
Dynamic relocation

Feedback
The correct answer is: Dynamic relocation

Static relocation is performed by:

Question 59Answer

and.
Loader

b.
Linker

c.
Paging system

d.
Special registers (DATUM)

Feedback
The correct answers are: Linker, Loader

What is a scheduler?

Question 60Select all correct:

and.
the system process that allocates the processor

b.
memory allocation procedure

c.
procedure that schedules frame release in the page replace algorithm

d.
a kernel routine that selects a task to execute

Feedback

Your answer is correct.

The correct answer is: a kernel routine that selects a task to execute

What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 3 processors

task

1

2

3

4

processing time

3.2

6.2

2.7

1.6

Answer:Question 61
3.82
Feedback
The correct answer is: 3.8

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.::

the beginning of strip 0,1,2,3 looks like this:

0

1

0

0

1

Parity disk

1

1

1

1

1

Disk 3

1

0

1

1

0

Disk 2

1

0

1

0

1

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values   are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.

Disk 3 has been corrupted and always reads 1. After replacing the disk with a new one, what values

should be put in the strip on disk 3?

Answer:Question 62
1, 1, 0, 1
Feedback
The correct answer is: 11001

Assuming memory cells are 1-byte, the page number in the address field is 12 bits, the offset is 12 bits, the frame number is 10 bits, and all entries in the TIS page index table are on a 16-bit word boundary, enter:

- the maximum size of the program's virtual memory in MB

Answer:Question 63
16
Feedback
The correct answer is: 2
##

##
##############   File: Example 1.txt #########
##

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1
Correct
Points: 1.00 out of 1.00
Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%
%%%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2
Correct
Points: 1.00 out of 1.00
What are the functions of the kernel?
a. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3
Correct
Points: 1.00 out of 1.00
The root directory of the disk should be located:
a. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4
Correct
Points: 1.00 out of 1.00
Virtual memory consists of:
Select all correct:
a. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answer is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie
Punkty: 0,00 z 1,00
The page fault interrupt is used to:
Wybierz wszystkie poprawne:
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answer is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Wybierz wszystkie poprawne:
a.
relocation
b. compaction
c.

paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Wybierz wszystkie poprawne:
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie
Punkty: 0,00 z 1,00
Which mechanisms are supported by the phenomenon of locality of references?
Wybierz wszystkie poprawne:
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.

associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answer is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Wybierz wszystkie poprawne:
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answer is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Wybierz wszystkie poprawne:
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Wybierz wszystkie poprawne:
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Wybierz wszystkie poprawne:
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Wybierz wszystkie poprawne:
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 16
Niepoprawnie
Punkty: 0,00 z 1,00
Page thrashing is a phenomenon involving:
Wybierz wszystkie poprawne:
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answer is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answer is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 18
Niepoprawnie
Punkty: 0,00 z 1,00
Dynamic relocation:
Wybierz wszystkie poprawne:
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00

Paging - the key in associative memory is:
Wybierz wszystkie poprawne:
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answer is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Wybierz wszystkie poprawne:
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Wybierz wszystkie poprawne:
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie
Punkty: 0,00 z 1,00
Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.

about the physical location of the files
d. about the type of disks the system should have
The correct answer is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Wybierz wszystkie poprawne:
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie
Punkty: 0,00 z 1,00
The resources of the computer system are:
Wybierz wszystkie poprawne:
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Wybierz wszystkie poprawne:
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.

The correct answer is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Wybierz wszystkie poprawne:
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answer is: nothing special, it builds the context on the kernel system stack

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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie
Punkty: 0,00 z 1,00
Opening a file in UNIX writes the following entries in the operating system's data structures:
Wybierz wszystkie poprawne:
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Wybierz wszystkie poprawne:
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

14/32

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Wybierz wszystkie poprawne:
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answer is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Wybierz wszystkie poprawne:
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 32
Niepoprawnie
Punkty: 0,00 z 1,00
a page fault interrupt occurs when:

Wybierz wszystkie poprawne:
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answer is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie
Punkty: 0,00 z 1,00
Fragmentation is implied by:
Wybierz wszystkie poprawne:
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Wybierz wszystkie poprawne:
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie

Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answer is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Wybierz wszystkie poprawne:
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answer is: blocked

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Wybierz wszystkie poprawne:
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answer is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice

d. task period
The correct answer is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie
Punkty: 0,00 z 1,00
In which swapping algorithms is it necessary to clear the M bits individually?
Wybierz wszystkie poprawne:
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answer is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie
Punkty: 0,00 z 1,00
In a FAT-based disk system, file size is directly limited by:
Wybierz wszystkie poprawne:
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie
Punkty: 0,00 z 1,00
In which swapping algorithms is it necessary to collectively clear the bits R?
Wybierz wszystkie poprawne:

a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie
Punkty: 0,00 z 1,00
In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Wybierz wszystkie poprawne:
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

21/32

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Wybierz wszystkie poprawne:
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answer is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00

SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answer is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answer is: Kernel-level threads require their descriptors in the kernel.

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie
Punkty: 0,00 z 1,00
Which swapping algorithms use the last reference time?
Wybierz wszystkie poprawne:
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Wybierz wszystkie poprawne:
a.
suspended
b. running
c.
ready
d. waiting

Twoja odpowiedź jest poprawna.
The correct answer is: ready

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie
Punkty: 0,00 z 1,00
What type of code can be executed simultaneously on multiple processors?
Wybierz wszystkie poprawne:
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answer is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Wybierz wszystkie poprawne:
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answer is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie

Punkty: 1,00 z 1,00
The segment descriptor table contains:
Wybierz wszystkie poprawne:
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answer is: address of the segment page index table of the top-level (first level) in the hierarchy

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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Wybierz wszystkie poprawne:
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answer is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Wybierz wszystkie poprawne:
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Wybierz wszystkie poprawne:
a.

Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie
Punkty: 0,00 z 1,00
The common allocation queue to fixed blocks of memory of equal size causes:
Wybierz wszystkie poprawne:
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answer is: internal fragmentation

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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie
Punkty: 0,00 z 1,00
MMU uses index tables to:
Wybierz wszystkie poprawne:
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answer is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie
Punkty: 0,00 z 1,00
The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answer is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00

Address translation mechanism:
Wybierz wszystkie poprawne:
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answer is: Concatenates the frame number and offset on the page

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answer is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie
Punkty: 0,00 z 1,00
What type of code can multiple processes execute simultaneously?
Wybierz wszystkie poprawne:
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answer is: reentrant

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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answer is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

##

##
############### File: .~lock.Document.rtf# #########
##
,mafzal,mafzal,23.06.2024 02:50,file:///home/mafzal/.config/libreoffice/4;
##

##
############### File: AtharTEst2.txt #########

##
Is memory protection useless on a single-user system?

Question 1Answer
True
False
Feedback
The correct answer is 'False'.
Question 2
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
Dynamic relocation is performed by:

Question 2Answer

a.
Special registers (DATUM)

b.
Paging system

c.
Loader

d.
Linker

Feedback
The correct answers are: Special registers (DATUM), Paging system
Question 3
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
A single-program system is one that, in principle:

Question 3Select one or more:

a.
Allows for storing only one program in primary memory

b.
Runs on a uniprocessor computer

c.
Needs relocation

d.
Allows for storing only one program in mass memory

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Allows for storing only one program in primary memory
Question 4
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
In a FAT-based disk system, file size is directly limited by:

Question 4Select one or more:

a.
The number of bits of the disk address

b.
The size of the disk space

c.
The number of bits of the field describing the size of the file

d.
Allocation unit size

e.
FAT table size

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file
Question 5
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Calling the program with the "exec" operation results in (accurately to the result of the exec operation):

Question 5Select one or more:

a.
Loading a code segment from disk, duplicating data segments and the calling process stack

b.
Loading code and data segments from disk, initializing a new stack segment

c.
Loading a code segment from disk, duplicating the data segment of the calling process

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: Loading code and data segments from disk, initializing a new stack segment
Question 6
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Twins algorithm:

Question 6Select one or more:

a.
Causes external fragmentation

b.
Causes less fragmentation than static division into equal blocks

c.
Causes internal fragmentation

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Causes internal fragmentation, Causes external fragmentation, Causes less fragmentation than static division into equal blocks
Question 7
Correct
Mark 1.00 out of 1.00
Flag question
Question text
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception is raised in system mode?

Question 7Select one or more:

a.
nothing special, it builds the context on the kernel system stack

b.
switches to the next kernel system stack

c.

initializes the kernel system stack from the scratch

d.
switches back to the application program stack

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: nothing special, it builds the context on the kernel system stack
Question 8
Correct
Mark 1.00 out of 1.00
Flag question
Question text
When starting a program, how is control passed to it from the operating system?

Question 8Select one or more:

a.
extracode

b.
return from interrupt handler IRET

c.
jump with trace

d.
jump

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: return from interrupt handler IRET
Question 9
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The return from interrupt instruction:

Question 9Select one or more:

a.
always jumps to the process that was interrupted

b.
restores the stack pointer

c.
restores the interrupt vector

d.
restores general purpose registers

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: restores the interrupt vector
Question 10
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The multi-level interrupt controller includes:

Question 10Select one or more:

a.
Priority encoder

b.
Individual interrupt mask

c.
Collective interrupt mask

d.
The register of interrupt being serviced

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Collective interrupt mask, Individual interrupt mask, Priority encoder
Question 11
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
In which swapping algorithms is it necessary to clear the R bits individually?

Question 11Select one or more:

a.
clock

b.
working set

c.
optimal

d.
no algorithm

e.
second chance

f.
LFU

g.
FIFO

h.
LRU

i.
NRU

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: second chance, working set,
clock

Question 12
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Which scheduler needs to make a decision the fastest?

Question 12Answer

a.
additional

b.
medium-term

c.
short-term

d.
long-term

Question 13
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Opening a file in UNIX writes the following entries in the operating system's data structures:

Question 13Select one or more:

a.
Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

b.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

c.
Inserting a new item into the Table of Open Files of the Process

Question 14
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Connection with segmentation consists in:

Question 14Select one or more:

a.
Dividing pages into segments

b.
Generating a "frame error" interrupt when the frame containing the page does not belong to the current segment

c.
Identifying segments with pages

d.

The use of a segment table or pool of segment registers treated as an additional, superior level of paging

Question 15
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Scheduling disk access involves deciding on the following:

Question 15Answer

a.
the order in which disk access requests should be handled

b.
about the type of disks the system should have

c.
about the physical location of the files

d.
which drive should be used next

Feedback
The correct answer is: the order in which disk access requests should be handled
Question 16
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The following paging exceptions allow for returning to the program after they occur:

Question 16Select one or more:

a.
page fault

b.
attempting to write to a write-protected frame

c.
attempt to read from the frame storing the code

d.

interrupt on write (IOW)

Question 17
Partially correct
Mark 0.75 out of 1.00
Flag question
Question text
Which mechanisms are supported by the phenomenon of locality of references?

Question 17Select one or more:

a.
page swapping

b.
reverse page index tables

c.
address translation

d.
associative memory of page references

e.
multilevel page index tables

Question 18
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The page reference and modification bits are used to:

Question 18Select one or more:

a.
Indication whether the frame is empty or contains a page

b.
Counting references to optimize exchanges

c.
Detection of locality of references

d.
Address translation support

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Counting references to optimize exchanges
Question 19
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
External fragmentation can be avoided by:

Question 19Select one or more:

a.
Application of the onion algorithm

b.
Freeing memory blocks in the reverse order to allocation

c.
Allocation of fixed size static memory blocks

d.
Freeing memory blocks in allocation order

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: Allocation of fixed size static memory blocks, Freeing memory blocks in the reverse order to allocation
Question 20
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The number of tasks performed on the system in a given time is:

Question 20Select one or more:

a.
efficiency

b.
response time

c.
utilization

d.
throughput

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: throughput
Question 21
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The segment descriptor table contains:

Question 21Select one or more:

a.
address of the segment page index table of the top-level (first level) in the hierarchy

b.
addresses of all segment page index tables

c.
address of the segment page index table of the bottom-level (last level) in the hierarchy

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: address of the segment page index table of the top-level (first level) in the hierarchy
Question 22
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Using the Test-And-Set instruction in synchronization:

Question 22Select one or more:

a.
Stops the processor if 0 is read

b.

It requires processes to actively wait

c.
Requires organizing inactive waiting in queues

d.
Requires an explicit relinquishment of the processor to another process

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: It requires processes to actively wait
Question 23
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What mechanism is part of batch systems?

Question 23Answer

a.
medium-term scheduler

b.
no scheduler is needed

c.
short-term scheduler

d.
long-term scheduler

Feedback
The correct answers are: long-term scheduler, medium-term scheduler
Question 24
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The conversion of the effective address to the physical one takes place:

Question 24Select one or more:

a.
in the bus arbiter

b.
in the memory management unit

c.
in the sequencer

d.
in the arithmetic-logic unit

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: in the memory management unit
Question 25
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The system stack must provide space for:

Question 25Select one or more:

a.
Processor registers in as many copies as there are interrupt lines +1

b.
CPU registers

c.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

d.
Processor registers in as many copies as there are devices in the system +1

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: Processor registers in as many copies as there are interrupt lines +1
Question 26
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The following situations trigger "error" exceptions:

Question 26Select one or more:

a.
attempting to execute in user mode an instruction that is only legal in system mode

b.

extracode

c.
attempting to execute an illegal instruction

d.
page fault (also known as frame fault, frame error, page miss)

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: attempting to execute an illegal instruction, attempting to execute in user mode an instruction that is only legal in system mode
Question 27
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
What does the file system layer do?

Question 27Answer

a.
Manages relationships between files

b.
Manages files

c.
Manages remote file systems

d.
Manages remote files

Feedback
The correct answer is: Manages files
Question 28
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The root directory of the disk should be located:

Question 28Answer

a.
at a fixed address in main memory

b.

in a place designated by the data structure in a fixed location on the disk

c.
in a permanent place on the disk

d.
in a place hard-coded in the structures of the operating system

Question 29
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Scheduler function is:

Question 29Answer

a.
counting the CPU time used by tasks

b.
changing task priorities

c.
selecting a task to run

d.
scheduling tasks on the processor

Question 30
Correct
Mark 1.00 out of 1.00
Flag question
Question text
System/user threads:

Question 30Select one or more:

a.
User-level threads share the same execution context.

b.
System level thread descriptors are stored in the program address space.

c.
User-level threads share the same stack.

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: User-level threads share the same execution context.
Question 31
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Twice consecutive execution in one process of operation P on a raised binary semaphore:

Question 31Select one or more:

a.
It doesn't change anything

b.
Decreases semaphore value by 2

c.
Causes the semaphore to get down

d.
If a semaphore guards a critical region, it leads to a deadlock

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: If a semaphore guards a critical region, it leads to a deadlock, Causes the semaphore to get down
Question 32
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Static relocation is performed by:

Question 32Answer

a.
Special registers (DATUM)

b.
Linker

c.
Paging system

d.
Segment descriptors

Question 33
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
How does the operating system call the task completion subroutine?

1.

Answer 1 Question 33
sets the trace in the terminating subroutine to the current position

3.

Answer 2 Question 33
builds the frame of the terminating subroutine on the task stack

2.

Answer 3 Question 33
recreates the context programmatically and executes the IRET instruction

4.

Answer 4 Question 33
builds an interrupt vector on the system stack pointing to the terminating subroutine code

Question 34
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Frame access bits (reference and modification):

Question 34Select one or more:

a.
must be readable

b.

must be group readable

c.
must be available for writing

d.
must be available for group clear

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: must be readable, must be available for group clear, must be group readable
Question 35
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Which of the following statements applies to the process?

Question 35Answer

a.
The execution of the process must proceed in a sequential manner.

b.
A process is code and data loaded into main memory.

c.
A process is defined as a set of resources needed to run a program.

d.
A process is a running program.

Feedback
The correct answers are: A process is a running program., The execution of the process must proceed in a sequential manner., A process is defined as a set of resources needed to run a program.
Question 36
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The relocating loader generates addresses as the program is loaded into primary memory. These addresses are:

Question 36Answer

a.
Symbolic

b.
Absolute

c.
Indirect

d.
Relative

Feedback
The correct answer is: Absolute
Question 37
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The kernel is _____ user-level threads.

Question 37Answer

a.
aware

b.
unaware

c.
creator

d.
part

Feedback
The correct answer is: unaware
Question 38
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What type of code can multiple processes execute simultaneously?

Question 38Select one or more:

a.
self-modifying

b.
dynamically relocated

c.
reentrant

d.
binary

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: reentrant
Question 39
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What mechanism is used to desynchronize processes with different relative speeds?

Question 39Select one or more:

a.
buffer

b.
preempting

c.
interrupts

d.
scheduling

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: buffer
Question 40
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Semaphores are used to solve the problem:

Question 40Answer

a.
process scheduling

b.
races

c.
Belady problem

d.
mutual exclusion

Feedback
The correct answer is: mutual exclusion
Question 41
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Converting the effective address to physical is performed in:

Question 41Select one or more:

a.
sequencer

b.
arithmetic-logic unit

c.
memory management unit

d.
bus arbiter

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: memory management unit
Question 42
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The following situations cause "error" exceptions (processor internal interrupts)

Question 42Select one or more:

a.
instruction legal but prohibited in user mode

b.
extracode

c.
illegal instruction

The correct answers are: illegal instruction, instruction legal but prohibited in user mode
Question 43
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The internal state of the program supervisor layer is available for:

Question 43Answer

a.
OS kernel

b.
Applications

c.
File system layer

d.
User programs

Feedback
The correct answer is: OS kernel
Question 44
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What can happen when a job leaves the critical section and more than 1 task is waiting for the critical section?

Question 44Select one or more:

a.
deadlock waiting for critical section

b.
letting both tasks into the critical section

c.
active waiting for a critical section

d.
starvation awaiting a critical section

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: starvation awaiting a critical section
Question 45
Correct
Mark 1.00 out of 1.00
Flag question
Question text
In what states can a task occur?

Question 45Select one or more:

a.
resetted

b.
ready

c.
current

d.
blocked
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: current, ready, blocked
Question 46
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The result of cooperation of concurrent processes:

Question 46Select one or more:

a.
it may depend on how processes are scheduled

b.
it is always deterministic

c.
it can be non-deterministic
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: it may depend on how processes are scheduled, it can be non-deterministic

Question 47
Partially correct
Mark 0.67 out of 1.00
Flag question
Question text
What is true about system level threads?

Question 47Answer

a.
All process threads share the same address space.

b.
All process threads can share the same set of open files.

c.
All process threads can share the same set of child processes.

d.
Thread switching does not require interaction with the operating system.

Feedback
The correct answers are: All process threads can share the same set of open files., All process threads share the same address space., All process threads can share the same set of child processes.

Question 48
Correct
Mark 1.00 out of 1.00
Flag question
Question text
A typical collection of program segments includes (come of them can be combined):

Question 48Select one or more:

a.
stack segment

b.
data segment

c.
Code segment

d.
page index tables segment

e.

processor registers segment

The correct answers are: Code segment, data segment, stack segment
Question 49
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The algorithm in which the most recently used page is swapped out is called (enter the abbreviation if applicable):

Answer: Question 49
MRU (Most Recently Used) algorithm
Feedback
The correct answer is: LRU
Question 50
Correct
Mark 1.00 out of 1.00
Flag question
Question text
MMU uses index tables to:

Question 50Select one or more:

a.
generating a physical address

b.
generate a relative address

c.
generate a logical address

d.
generate an effective address

The correct answer is: generating a physical address
Question 51
Correct
Mark 1.00 out of 1.00
Flag question
Question text
A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Question 51Select one or more:

a.
paging

b.
fragmentation

c.
mapping

d.
swapping

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: paging
Question 52
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What mechanism is part of time-sharing systems?

Question 52Answer

a.
high-level scheduler

b.
swapping

c.
low-level scheduler

d.
medium-level scheduler

Feedback
The correct answer is: low-level scheduler
Question 53
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Effective address is:

Question 53Select one or more:

a.
logical address

b.
indirect address

c.
relative address

d.
physical address

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: logical address
Question 54
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
WORST-FIT algorithm:

Question 54Select one or more:

a.
It allows for fast determining whether there is a free block of the required size

b.
It is designed to reduce external fragmentation

c.
Requires a descending sort of the list of free blocks

d.
Requires sorting the cut part into the list of free blocks

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answers are: Requires a descending sort of the list of free blocks, It allows for fast determining whether there is a free block of the required size, It is designed to reduce external fragmentation, Requires sorting the cut part into the list of free blocks
Question 55

Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Collective interrupt mask is:

Question 55Select one or more:

a.
register in which the address of the interrupt controller is stored

b.
a combinational circuit that calculates the number of the interrupt received

c.
a register that blocks or unblocks all interrupts

d.
a register that blocks or unlocks a non-maskable interrupt

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: a register that blocks or unblocks all interrupts
Question 56
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Which swapping algorithms use page reference history?

Question 56Select one or more:

a.
working set

b.
NRU

c.
FIFO

d.
second chance

e.
working set clock

f.
LRU

g.
LFU

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: LRU, LFU
Question 57
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
Static relocation is performed by:

Question 57Answer

a.
Linker

b.
Loader

c.
Paging system

d.
Special registers (DATUM)

Feedback
The correct answers are: Linker, Loader
Question 58
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The direct resume rule means that:

Question 58Select one or more:

a.
The resuming process loses the critical region

b.
The resuming process gets a critical region after the resumed process exits the critical region

c.

The resuming process applies for the critical region just like other processes waiting to enter the critical region

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just like other processes waiting to enter the critical region
Question 59
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Belady anomaly occurs in:

Question 59Answer

a.
LIFO

b.
LRU

c.
FIFO

d.
NRU

Feedback
The correct answer is: FIFO
Question 60
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
A multiprogram system is one that, in principle:

Question 60Select one or more:

a.
Allows for running more than one program at the same time

b.
Allows for storing multiple programs in mass memory

c.
It allows for storing many programs in the main memory

d.
Allows for running programs only one after another

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: It allows for storing many programs in the main memory
Question 61
Correct
Mark 5.00 out of 5.00
Flag question
Question text
What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 3 processors

task

1

2

3

4

processing time

3.6

6

2.6

1.3

Answer:Question 61
3.7
Feedback
The correct answer is: 3.7
Question 62
Correct
Mark 5.00 out of 5.00
Flag question
Question text

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:

1

1

1

0

0

Parity disk

0

0

0

0

0

Disk 3

1

0

0

1

0

Disk 2

1

0

1

1

0

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 even.

Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?

Answer:Question 62
1 0 1 0 0
Feedback
The correct answer is: 10100
Question 63
Incorrect
Mark 0.00 out of 5.00
Flag question
Question text
Assuming memory cells are 1-byte, the page number in the address field is 12 bits, the offset is 12 bits, the frame number is 10 bits, and all entries in the TIS page index table are on a 16-bit word boundary, enter:

- the maximum size of the program's virtual memory in MB

Answer:Question 63
16
Feedback
The correct answer is: 4
##

##
############### File: AfzalTest2.txt #########
##
Question 1Select one or more:

The root directory of the disk should be located:

Question 1Answer

a.
in a place hard-coded in the structures of the operating system

b.
in a place designated by the data structure in a fixed location on the disk

c.
at a fixed address in main memory

d.
in a permanent place on the disk

Feedback
The correct answer is: in a place designated by the data structure in a fixed location on the disk

Twins algorithm:

Question 2Select one or more:

a.
Causes external fragmentation

b.
Causes less fragmentation than static division into equal blocks

c.
Causes internal fragmentation

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answers are: Causes internal fragmentation, Causes external fragmentation, Causes less fragmentation than static division into equal blocks

The kernel (microkernel) is responsible for:

Question 3Select one or more:

a.
task control

b.
memory allocation and freeing

c.
interrupt handling (at the elementary level, then they are passed on to other layers).

d.
synchronization of processes and devices with processes

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the elementary level, then they are passed on to other layers).

In UNIX, access rights are specified:

Question 4Select one or more:

a.
Separately for write, read and execute/search

b.
Separately for the user, the group to which the user belongs and for all others

c.
Individually for each file

d.
At the same time, for all files in a given directory owned by the user

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.

The correct answers are: Individually for each file, Separately for the user, the group to which the user belongs and for all others, Separately for write, read and execute/search

The logical address is also:

Question 5Select one or more:

a.
Relative address

b.
Effective address

c.
Physical address

d.
Absolute address

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Effective address

Internal fragmentation consists in:

Question 6Select one or more:

a.
The program does not use all the memory allocated to it

b.
Dividing the memory allocated to the program into a data area and a code area

c.
Free memory blocks between allocated blocks

d.
Discontiguous file allocation on disk

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: The program does not use all the memory allocated to it

Which scheduling is used to organize concurrency?

Question 7Select one or more:

a.
medium-term

b.
short-term

c.
preempting

d.
long-term

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: short-term

Which of the following few common services can be partially provided by software other than the operating system?

Question 8Answer

a.
I/O operations

b.

Manipulating the file system

c.
Security and protection

d.
Running programs

Feedback
The correct answers are: Security and protection, Manipulating the file system

he return from interrupt instruction:

Question 9Select one or more:

a.
restores general purpose registers

b.
restores the interrupt vector

c.
always jumps to the process that was interrupted

d.
restores the stack pointer

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: restores the interrupt vector

Operation V on a raised binary semaphore:

Question 10Select one or more:

a.
It is stored in order to be able to perform as many operations P as there were V

b.
It does not change the value of the semaphore

c.
Increases semaphore value by 1

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: It does not change the value of the semaphore

The effective address is at the same time:

Question 11Select one or more:

a.
relative address

b.
indirect address

c.
logical address

d.
physical address

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: logical address

The hardware resources of a computer system are:

Question 12Select one or more:

a.
Windows on the screen

b.
Peripheral devices

c.
Processor time

d.
Primary memory

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Processor time, Primary memory, Peripheral devices

The following paging exceptions allow for returning to the program after they occur:

Question 13Select one or more:

a.
attempting to write to a write-protected frame

b.
attempt to read from the frame storing the code

c.
page fault

d.
interrupt on write (IOW)

How does the operating system call the task completion subroutine?

4.

Answer 1 Question 14
sets the trace in the terminating subroutine to the current position

2.

Answer 2 Question 14
builds the frame of the terminating subroutine on the task stack

1.

Answer 3 Question 14
builds an interrupt vector on the system stack pointing to the terminating subroutine code

3.

Answer 4 Question 14
recreates the context programmatically and executes the IRET instruction

Dynamic relocation requires the use of:

Question 15Select one or more:

a.
limit register

b.
status register

c.
base register (DATUM)

d.
program counter

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: base register (DATUM)

What mechanism is used to desynchronize processes with different relative speeds?

Question 16Select one or more:

a.
buffer

b.
preempting

c.
interrupts

d.
scheduling

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: buffer

Which of the following information is stored on task switching?

Question 17Answer

a.
I/O status information

b.
Contents of datum, limit and other registers inaccessible to the program

c.
scheduler data

d.
Contents of general purpose registers, program counter, and similar registers available to the program

Feedback
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the program, Contents of general purpose registers, program counter, and similar registers available to the program

The direct resume rule means that:

Question 18Select one or more:

a.
The resuming process gets a critical region after the resumed process exits the critical region

b.
The resuming process applies for the critical region just like other processes waiting to enter the critical region

c.
The resuming process loses the critical region
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just like other processes waiting to enter the critical region

Static relocation is performed by:

Question 19Answer

a.
Special registers (DATUM)

b.
Loader

c.
Compiler

d.
Segment descriptors

For address translation, the following is used:

Question 20Select one or more:

a.
reference and protection bits

b.
translation register

c.
associative translation buffer

d.
index table

The system stack must provide space for:

Question 21Select one or more:

a.
CPU registers

b.
Processor registers in as many copies as there are devices in the system +1

c.
Processor registers in as many copies as there are interrupt lines +1

d.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

The correct answer is: Processor registers in as many copies as there are interrupt lines +1

Connection with segmentation consists in:

Question 22Select one or more:

a.
The use of a segment table or pool of segment registers treated as an additional, superior level of paging

b.
Dividing pages into segments

c.
Generating a "frame error" interrupt when the frame containing the page does not belong to the current segment

d.
Identifying segments with pages

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: The use of a segment table or pool of segment registers treated as an additional, superior level of paging

What type of code can multiple processes execute simultaneously?

Question 23Select one or more:

a.
reentrant

b.
binary

c.
self-modifying

d.
dynamically relocated

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: reentrant

a page fault interrupt is issued when:

Question 24Select one or more:

a.
the program is accessing a page that is not in the cache

b.
the program accesses the page

c.
the program accesses a page that is not in the primary memory

d.
an error has occurred on the current page

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: the program accesses a page that is not in the primary memory

The scheduler decisions take the form:

Question 25Select one or more:

a.
change from ready to active state

b.
change from waiting to active state

c.
change from active to ready state

d.
change from waiting to ready state

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: change from ready to active state

Using the Test-And-Set instruction in synchronization:

Question 26Select one or more:

a.
Requires organizing inactive waiting in queues

b.
It requires processes to actively wait

c.
Requires an explicit relinquishment of the processor to another process

d.
Stops the processor if 0 is read

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: It requires processes to actively wait

Address translation aims to:

Question 27Select one or more:

a.
converting a physical address to a virtual one

b.
converting a virtual address to a physical one

c.
detecting the phenomenon of locality of references

d.
Generating a "frame error" interrupt when the page is out of memory

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: converting a virtual address to a physical one

System/user threads:

Question 28Select one or more:

a.
User-level threads share the same stack.

b.
User-level threads share the same execution context.

c.
System level thread descriptors are stored in the operating system kernel.

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: System level thread descriptors are stored in the operating system kernel.,
User-level threads share the same execution context.

The program must be specially compiled to run in paged memory.

Question 29Answer
True
False
Feedback
The correct answer is 'False'.

The mechanism for moving programs between parimary memory and mass storage is called:

Question 30Answer

a.
sweeping

b.
swapping

c.
leaching

d.
leading out

Feedback
The correct answer is: sweeping

The internal state of the file system layer is available for:

Question 31Answer

a.
Applications

b.
User programs

c.
OS kernel

d.
Program supervisor layer

Feedback
The correct answers are: OS kernel, Program supervisor layer

Sequence of actions when starting a new task:
1.

Answer 1 Question 32
filling in the descriptor in the kernel

2.

Answer 2 Question 32
memory allocation if this is the first task of the program

3.

Answer 3 Question 32
initialize the stack, fill the first frame

4.

Answer 4 Question 32
instruction to transfer control to the task

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: 1. → filling in the descriptor in the kernel, 2. → memory allocation if this is the first task of the program, 3. → initialize the stack, fill the first frame, 4. → instruction to transfer control to the task

The page index table address is stored in:

Question 33Select one or more:

a.
program counter

b.
page register

c.
stack pointer

d.
page table base register

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: page table base register

Is IOW bit:

Question 34Select one or more:

a.
protection bit

b.
reference bit

c.
enable bit

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: protection bit

When starting a program, how is control passed to it from the operating system?

Question 35Select one or more:

a.
extracode

b.
jump with trace

c.
jump

d.
return from interrupt handler IRET

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: return from interrupt handler IRET

The software resources of a computer system are:

Question 36Select one or more:

a.

Files

b.
Buffers

c.
Semaphores

d.
Primary memory

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: Files, Buffers, Semaphores

The main function of shared memory is:

Question 37Answer

a.
inter-process communication

b.
use working memory efficiently

c.
inter-process synchronization

d.
inter-process scheduling

Feedback
The correct answer is: inter-process communication

Which of the following facilities or abilities are required to provide mutual exclusion support?

Question 38Select one or more:

a.
The relative speeds of the tasks must be taken into account.

b.
Task scheduling must be considered.

c.
A task that is performed outside the critical section must not affect the behavior of a task in the critical

section.

d.
The task stays in its critical section only for a finite amount of time.

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: A task that is performed outside the critical section must not affect the behavior of a task in the critical section., The task stays in its critical section only for a finite amount of time.

Allocation unit for file storage:

Question 39Answer

a.
must be constant across the disk partition

b.
may vary between partitions

c.
may differ between files in a partition

d.
is any integer multiple of a sector (>0)

Feedback
The correct answers are: must be constant across the disk partition, may vary between partitions

Frame protection bits:

Question 40Select one or more:

a.
must be available for group clear

b.
must be readable

c.
must be group readable

d.
must be available for writing

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: must be available for writing

The following situations cause "error" exceptions (processor internal interrupts)

Question 41Select one or more:

a.
extracode

b.
illegal instruction

c.
instruction legal but prohibited in user mode

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: illegal instruction, instruction legal but prohibited in user mode

Precise interrupts are:

Question 42Select one or more:

a.
unblocked only in a stable state between the execution of successive instructions

b.
only issued in a stable state between executions of subsequent instructions

c.
accepted only in a stable state between the execution of successive instructions

d.
transferred only in a stable state between the execution of successive instructions instrukcji

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: accepted only in a stable state between the execution of successive instructions

What mechanism is used to preserve the states of preempted tasks?

Question 43Answer

a.
time slice

b.
batch work

c.
task period

d.
context switch

Feedback
The correct answer is: context switch

In the sweeping mechanism, a program should be loaded into memory when:

Question 44Select one or more:

a.
The programmatical condition for the continuation of the program was met by another program

b.
The device the program was waiting for has freed up

c.
The time the program was supposed to be "wake up" has occurred

d.
The data transmission to the printer, ordered by the program, has ended

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: The data transmission to the printer, ordered by the program, has ended, The programmatical condition for the continuation of the program was met by another program, The device the program was waiting for has freed up, The time the program was supposed to be "wake up" has occurred

With indulgent scheduling, once a CPU is allocated to a task, the task keeps it until:

Question 45Select one or more:

a.
transition a task from the ready state to the active state

b.
releasing the processor by the task

c.
task termination

d.
transition a task from the active state to the ready state

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: task termination, releasing the processor by the task

The thread is also called:

Question 46Answer

a.
heavy process

b.
lightweight process

c.
data process

d.
overlay process

Feedback
The correct answer is: lightweight process

n UNIX, access rights are attributes:

Question 47Select one or more:

a.
An entry in the I-node table

b.
User descriptor

c.
A directory entry for a file

d.
A special table specifying access rights

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: An entry in the I-node table

Discontinuous allocation is the result of:

Question 48Select one or more:

a.
compacting

b.
paging

c.
reloaction

d.
segmentation

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: paging, segmentation

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Answer: Question 49
the exchange algorithm opposite to that expected with the measures taken is referred to as "sunspot equilibria". These equilibria arise due to stochastic fluctuations in agents' beliefs, leading to unexpected behavior in the exchange rate.
Feedback
The correct answer is: anomaly

Which of the following interrupts a running process?

Question 50Answer

a.
Hardaware interrupt

b.
Timer interrupts

c.
Scheduler

d.
Power fail interrupt

Feedback
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

Scheduling aims to optimize:

Question 51Select one or more:

a.
processor utilization

b.
reaction time

c.
wait time

d.
system throughput

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: processor utilization, system throughput, wait time, reaction time

The multi-level interrupt controller includes:

Question 52Select one or more:

a.
The register of interrupt being serviced

b.
Priority encoder

c.
Individual interrupt mask

d.
Collective interrupt mask

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Collective interrupt mask, Individual interrupt mask, Priority encoder

Using Test-And-Set or Compare-And-Swap in synchronization:

Question 53Select one or more:

a.
Stops the processor if 0 is read

b.
Requires organizing inactive waiting in queues

c.
It can only be applied in systems with shared memory

d.
It requires processes to actively wait

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: It requires processes to actively wait,
It can only be applied in systems with shared memory

Scheduling algorithms can be:

Question 54Answer

a.
indulgent

b.
preemptive

c.
interrupting

d.
term changing

Feedback
The correct answers are: indulgent, preemptive

The following situations trigger exceptions (processor internal interrupts) of the "error" type:

Question 55Select one or more:

a.
an attempt to write to the page for which the "read only" bit was set

b.
memory reference beyond limit register value

c.
memory reference in the area of the page that is not in memory

d.
a reference to memory that is not in the address space

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: a reference to memory that is not in the address space, memory reference beyond limit register value, an attempt to write to the page for which the "read only" bit was set

hat is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?

Question 56Select one or more:

a.
instruction register

b.
collective of individual interrupt mask

c.
program counter

d.
general purpose registers

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:

Question 57Select one or more:

a.
The size of the disk space

b.
Allocation unit size

c.
The number of bits of the field describing the size of the file

d.
The number of bits of the disk address

e.
FAT table size

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: FAT table size, The size of the disk space

Which of the following memory allocation schemes cause external fragmentation?

Question 58Answer

a.
Sweeping

b.
Segmentation

c.
Paging

d.
Multiple contiguous fixed partitions of equal size

Feedback
The correct answers are: Segmentation, Sweeping

The sweeping mechanism consists in:

Question 59Select one or more:

a.
Loading pages into the primary memory and sending them to the disk

b.
Loading segments into primary memory and sending them to disk

c.
Merging adjacent free memory blocks

d.
Moving programs around in memory to eliminate fragmentation

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Loading segments into primary memory and sending them to disk

Having two-level page index tables:

Question 60Select one or more:

a.
the content of a level I table element is added to the content of a level II table element

b.
the content of a level I table element points to a level II table

c.
the content of the level I table element is concatenated (combined) with the content of the level II table element

d.
the content of a level I table element is an index in a level II table

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: the content of a level I table element points to a level II table

What is the average time in the system for tasks in the batch, using SJF algorithm?

processing time

3.3

6.8

2.4

1.2

Answer:Question 61
3.8
Feedback
The correct answer is: 6.3

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:

1

1

1

0

0

Parity disk

0

0

0

0

0

Disk 3

1

0

0

1

0

Disk 2

1

0

1

0

1

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 even.

Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?

Answer:Question 62
0 0 0 0
Feedback
The correct answer is: 10111

The virtual address consists of 8b page number and 8b offset. The page index table is shown below (index, content). For decimal address 384, binary 0000 0001 1000 0000, enter the physical address in the form: frame number.offset (as decimal numbers, offset in 3 digits). For example, for a physical address consisting of frame 0 and offset 18, specify 0.018. If there is no physical address for the given virtual address, then -1 should be specified.

7

12

6

-1

5

7

4

4

3

9

2

-1

1

3

0

2

Answer:Question 63
3.128
Feedback
The correct answer is: 3.128
##

##
##############   File: Example1Overview.txt #########
##

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?

and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00

Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:

and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie

Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.

Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames

d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00

What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch

b. switches to the next kernel system stack

c.
switches back to the application program stack

d. nothing special, it builds the context on the kernel system stack

Twoja odpowiedź jest poprawna.

The correct answers is: nothing special, it builds the context on the kernel system stack

1

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Pytanie 27

Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:

Select all correct::

a.
Inserting a new item into the Table of Open Files of the Process

b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

Twoja odpowiedź jest niepoprawna.

The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,

Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 28

Poprawnie

Punkty: 1,00 z 1,00

The resources of the computer system are:

Select all correct::

a.
Primary memory

b. Processor time

c.
User programs

d. Peripheral devices

Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 29

Poprawnie

Punkty: 1,00 z 1,00

The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):

Select all correct::

a.
address translation, page index tables, page reference bits, "frame error" interrupt

b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory

c.
address translation, page index tables, "frame error" interrupt

d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

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Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 36

Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.

FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.

The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00

Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant

c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::

a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished

Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00

The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:

Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.

Increases semaphore value by 2

d. If the semaphore guards a critical region, it can lets two processes enter the critical region

Twoja odpowiedź jest poprawna.

The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the

semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 15

Poprawnie

Punkty: 1,00 z 1,00

In what states can a task occur?

Select all correct::

a.

current

b. ready

c.

resetted

d. blocked

Twoja odpowiedź jest poprawna.

The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 16

Niepoprawnie

Page thrashing is a phenomenon involving:

Select all correct::

a.

frequent context changes that require page index tables to be reloaded

b. frequent downloading of pages that have just been swapped out from memory

c.

frequently changing the values of bits describing pages in frames

d. loading the same page over and over again

Twoja odpowiedź jest niepoprawna.

The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 17

Poprawnie

Punkty: 1,00 z 1,00

The internal state of the program supervisor layer is available for:

a.

Applications

b. OS kernel

c.

File system layer

d. User programs

The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::

a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and
what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the

elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie

Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set

b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00

In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address

b. generate a physical address

c.

generate an effective address

d. generate a logical address

Twoja odpowiedź jest niepoprawna.

The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 57

Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Odpowiedź:

thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 58

Poprawnie

Punkty: 1,00 z 1,00

Address translation mechanism:

Select all correct::

a.

Adds the frame number to the page number

b. Concatenates the frame number and page number

c.

Concatenates the frame number and offset on the page

d. Concatenates the page number and page offset

Twoja odpowiedź jest poprawna.

The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 59

Poprawnie

Punkty: 1,00 z 1,00

Static relocation is performed by:

a.

Special registers (DATUM)

b. Segment descriptors

c.

Linker

d. Paging system

The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 60

Niepoprawnie

What type of code can multiple processes execute simultaneously?

Select all correct::

a.

dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63

Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12
bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to
the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and

status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.

The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9

Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::

a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::

a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external

fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:

Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time

c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler

The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie

Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues

Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::

a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler

The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54

Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation

Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,

associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:

Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number

c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):

Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory

Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.

task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU

f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue

The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.

The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.

The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie

Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.

The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page

d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00

BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00

In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.

The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.

The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie

Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and
what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter
in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.

Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.

Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies

for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.

It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00

When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.

Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie

Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.

The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page

references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13

Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::

a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.

the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and

what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter
in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::

a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.

The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling

d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39

Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm

g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the

hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started

State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:

and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the

program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie

Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:

a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations

Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).

b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt
handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks

e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.

The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file

c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::

a.

Requires an explicit relinquishment of the processor to another process

b. Stops the processor if 0 is read

c.

Requires organizing inactive waiting in queues

d. It requires processes to actively wait

Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 50

Częściowo poprawnie

Punkty: 0,50 z 1,00

Static relocation is performed by:

a.

Segment descriptors

b. Special registers (DATUM)

c.

Loader

d. Compiler

The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 51

Poprawnie

Punkty: 1,00 z 1,00

The segment descriptor table contains:

Select all correct::

a.

address of the segment page index table of the bottom-level (last level) in the hierarchy

b. addresses of all segment page index tables

c.

address of the segment page index table of the top-level (first level) in the hierarchy

Twoja odpowiedź jest poprawna.

The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52

Poprawnie

Punkty: 1,00 z 1,00

The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:

Select all correct::

a.

time slicing

b. priority

c.

SJF

d. FCFS

Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1. saving a copy of the interrupt vector (PC and SR)
2. switching to system mode (modification of PC and status register)
3. programmatic context saving
4. switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register

d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor

Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::

a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::

a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.

The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31

Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.

The resuming process applies for the critical region just like other processes waiting to enter the critical region

b. The resuming process gets a critical region after the resumed process exits the critical region

c.
The resuming process loses the critical region

Twoja odpowiedź jest poprawna.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00

In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:

a.
traffic control

b. task management

c.
task sheduling

d. task timetable management

The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00

After accepting an interrupt, the next interrupts are:

Select all correct::

a.
unblocked

b. some blocked, some unblocked, developer decides

c.
blocked

d. partly blocked, partly unblocked, according to the level of the accepted interrupt

Twoja odpowiedź jest poprawna.

The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00

By definition, a deadlock is a situation where:

Select all correct::

a.
exactly one process is waiting for a condition that cannot be met

b. at least two processes are waiting for conditions that cannot be met

c.

any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file

d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie

Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock

Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50

Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination

d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:

8192

The correct answer is: 8

32/32: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

8/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed

Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage

c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:

Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications

b. OS kernel

c.

File system layer

d. User programs

The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 18

Niepoprawnie

Dynamic relocation:

Select all correct::

a.

Requires relative references to be addressed when the program is loaded into memory

b. Requires hardware support in the form of a LIMIT register

c.

Requires hardware support in the form of a DATUM register

d. Allows for temporal elimination of external fragmentation

Twoja odpowiedź jest niepoprawna.

The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external

fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 19

Poprawnie

Punkty: 1,00 z 1,00

Paging - the key in associative memory is:

Select all correct::

a.

page number

b. the page number concatenated with the frame number

c.

the frame number concatenated with the page number

d. frame number

Twoja odpowiedź jest poprawna.

The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20

Poprawnie

Punkty: 1,00 z 1,00

The file system layer plays the following role in the operating system:

Select all correct::

a.

Controls file access rights

b. It performs directory services in the hierarchy of disk files

c.

It runs programs stored in files

d. Performs file opening and closing operations

Twoja odpowiedź jest poprawna.

The correct answers are: Performs file opening and closing operations, It performs directory services in

the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision
interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt
mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:

Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.

synchronization of processes and devices with processes

d. memory allocation and freeing

Twoja odpowiedź jest poprawna.

The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the

elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 31

Poprawnie

Punkty: 1,00 z 1,00

Which of the following interrupts a running process?

a.

Hardaware interrupt

b. Timer interrupts

c.

Power fail interrupt

d. Scheduler

The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 32

Niepoprawnie

a page fault interrupt occurs when:

Select all correct::

a.

the program accesses the page

b. an error has occurred on the current page

c.

the program is accessing a page that is not in the cache

d. the program accesses a page that is not in the primary memory

Twoja odpowiedź jest niepoprawna.

The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 33

Niepoprawnie

Fragmentation is implied by:

Select all correct::

a.

External by segmentation

b. Internal by paging

c.

External by resizing allocated blocks

d. Internal by partitioning into quantized blocks

e.

External by freeing blocks in a deallocation order not reverse to allocation

Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

19/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space

d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process

b. Stops the processor if 0 is read

c.

Requires organizing inactive waiting in queues

d. It requires processes to actively wait

Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 50

Częściowo poprawnie

Punkty: 0,50 z 1,00

Static relocation is performed by:

a.

Segment descriptors

b. Special registers (DATUM)

c.

Loader

d. Compiler

The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 51

Poprawnie

Punkty: 1,00 z 1,00

The segment descriptor table contains:

Select all correct::

a.

address of the segment page index table of the bottom-level (last level) in the hierarchy

b. addresses of all segment page index tables

c.

address of the segment page index table of the top-level (first level) in the hierarchy

Twoja odpowiedź jest poprawna.

The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52

Poprawnie

Punkty: 1,00 z 1,00

The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:

Select all correct::

a.

time slicing

b. priority

c.

SJF

d. FCFS

Twoja odpowiedź jest poprawna.

The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60

Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

9/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State

Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache

b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the

program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00

Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.

Applications
b. OS kernel
c.
File system layer
d. User programś
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.

The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control

c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.

External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:

no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.

The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46

Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.

Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.

The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56

Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1. saving a copy of the interrupt vector (PC and SR)
2. switching to system mode (modification of PC and status register)
3. programmatic context saving
4. switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:

Select all correct::

a.

Detection of an attempt to write outside the address space of the frame

b. Detection of an access attempt from a frame not allocated to the program

c.

Whether the frame is empty or contains a page

d. Downloads to the memory of the requested page

Twoja odpowiedź jest niepoprawna.

The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 6

Poprawnie

Punkty: 1,00 z 1,00

Discontinuous allocation is the result of:

Select all correct::

a.

relocation

b. compaction

c.

paging

d. segmantation

Twoja odpowiedź jest poprawna.

The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 7

Częściowo poprawnie

Punkty: 0,75 z 1,00

Which of the following information is stored on task switching?

a.

I/O status information

b. Contents of general purpose registers, program counter, and similar registers available to the program

c.

Contents of datum, limit and other registers inaccessible to the program

d. scheduler data

The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 8

Poprawnie

Punkty: 1,00 z 1,00

The return from interrupt instruction:

Select all correct::

a.

restores the process stack

b. causes the processor to switch to a process other than the interrupted one

c.

restores the conditions register

d. restores the program counter

Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.

The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

8/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.

Requires relative references to be addressed when the program is loaded into memory

b. Requires hardware support in the form of a LIMIT register

c.

Requires hardware support in the form of a DATUM register

d. Allows for temporal elimination of external fragmentation

Twoja odpowiedź jest niepoprawna.

The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external

fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 19

Poprawnie

Punkty: 1,00 z 1,00

Paging - the key in associative memory is:

Select all correct::

a.

page number

b. the page number concatenated with the frame number

c.

the frame number concatenated with the page number

d. frame number

Twoja odpowiedź jest poprawna.

The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 20

Poprawnie

Punkty: 1,00 z 1,00

The file system layer plays the following role in the operating system:

Select all correct::

a.

Controls file access rights

b. It performs directory services in the hierarchy of disk files

c.

It runs programs stored in files

d. Performs file opening and closing operations

Twoja odpowiedź jest poprawna.

The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,

Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21

Poprawnie

Punkty: 1,00 z 1,00

Devices report their readiness by:

Select all correct::

a.

system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt
handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie

Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical

region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met

d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size

e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00

Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.

The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie

Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving

Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)

2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.

Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register

c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt

c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie

Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?

a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region

c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.

The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size

Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::

a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:

a.

Segment descriptors

b. Special registers (DATUM)

c.

Loader

d. Compiler

The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 51

Poprawnie

Punkty: 1,00 z 1,00

The segment descriptor table contains:

Select all correct::

a.

address of the segment page index table of the bottom-level (last level) in the hierarchy

b. addresses of all segment page index tables

c.

address of the segment page index table of the top-level (first level) in the hierarchy

Twoja odpowiedź jest poprawna.

The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52

Poprawnie

Punkty: 1,00 z 1,00

The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:

Select all correct::

a.

time slicing

b. priority

c.

SJF

d. FCFS

Twoja odpowiedź jest poprawna.

The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 53

Poprawnie

Punkty: 1,00 z 1,00

In indulgent scheduling, the process keeps the CPU until:

Select all correct::

a.

next interrupt from the timer

b. next interrupt from the device

c.

termination

d. waiving

Twoja odpowiedź jest poprawna.

The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging

d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.

The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number

b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie

Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00

The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache

d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management

c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set

e.LFU

f.no algorithm

g.clock

h. working set

i.

FIFO

Twoja odpowiedź jest niepoprawna.

The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 42

Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:

Select all correct::

a.

FAT table size

b. The number of bits of the field describing the size of the file

c.

The size of the disk space

d. The number of bits of the disk address

e.

Allocation unit size

Twoja odpowiedź jest niepoprawna.

The correct answers are: FAT table size, The size of the disk space

2

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 43

Poprawnie

Punkty: 1,00 z 1,00

Using Test-And-Set or Compare-And-Swap in synchronization:

Select all correct::

a.

Can be applied only in distributed systems

b. Stops the processor if 0 is read

c.

It requires processes to actively wait

d. Requires organizing inactive waiting in queues

Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 44

Poprawnie

Punkty: 1,00 z 1,00

SJF selects the task:

a.

who waited the longest in the queue

b. which was last placed in the queue

c.

with the least CPU requirement

d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48

Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy

Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

27/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset

Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62

Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving

4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program

c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12

Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15

Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

8/326/19/24, 6:39 PM
Exam 1: Sample Overview

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Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register

d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit

d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

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Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:

Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt

b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region

Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of

the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems

b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47

Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors

b. Special registers (DATUM)

c.

Loader

d. Compiler

The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 51

Poprawnie

Punkty: 1,00 z 1,00

The segment descriptor table contains:

Select all correct::

a.

address of the segment page index table of the bottom-level (last level) in the hierarchy

b. addresses of all segment page index tables

c.

address of the segment page index table of the top-level (first level) in the hierarchy

Twoja odpowiedź jest poprawna.

The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 52

Poprawnie

Punkty: 1,00 z 1,00

The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:

Select all correct::

a.

time slicing

b. priority

c.

SJF

d. FCFS

Twoja odpowiedź jest poprawna.

The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 53

Poprawnie

Punkty: 1,00 z 1,00

In indulgent scheduling, the process keeps the CPU until:

Select all correct::

a.

next interrupt from the timer

b. next interrupt from the device

c.

termination

d. waiving

Twoja odpowiedź jest poprawna.

The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,

Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation

Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,

associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:

Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number

c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter
in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):

Select all correct::

a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory

Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.

task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU

f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue

The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.

The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.

The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie

Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.

The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page

references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13

Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::

a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.

the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and

what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter
in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::

a.

address translation, page index tables, page reference bits, "frame error" interrupt

b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory

c.

address translation, page index tables, "frame error" interrupt

d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper

Twoja odpowiedź jest poprawna.

The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 30

Poprawnie

Punkty: 1,00 z 1,00

The kernel (microkernel) is responsible for:

Select all correct::

a.

interrupt handling (at the elementary level, then they are passed on to other layers).

b. task control

c.

synchronization of processes and devices with processes

d. memory allocation and freeing

Twoja odpowiedź jest poprawna.

The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the

elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 31

Poprawnie

Punkty: 1,00 z 1,00

Which of the following interrupts a running process?

a.

Hardaware interrupt

b. Timer interrupts

c.

Power fail interrupt

d. Scheduler

The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 32

Niepoprawnie

a page fault interrupt occurs when:

Select all correct::

a.

the program accesses the page

b. an error has occurred on the current page

c.

the program is accessing a page that is not in the cache

d. the program accesses a page that is not in the primary memory

Twoja odpowiedź jest niepoprawna.

The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling

d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39

Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm

g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the

hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: task control, synchronization of processes and devices with processes, interrupt handling (at the elementary level, then they are passed on to other layers).

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started

State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:

and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the

program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie

Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:

a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations

Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and
what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).

b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks

e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.

The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file

c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::

a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

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Exam 1: Sample Overview

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Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS

Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

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Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

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Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

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Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

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Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

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Question 4

Virtual memory consists of:

Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

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Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

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Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other

registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

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Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14

Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

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Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00

The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

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Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files

d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

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Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

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Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt

mask

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Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

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Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

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Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

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Pytanie 27

Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

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Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

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Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.

interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

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Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

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Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks

d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

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Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

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Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.

The correct answers is: blocked

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Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

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Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal

Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

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Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

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Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

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Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size

b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

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Exam 1: Sample Overview

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Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

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Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

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Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

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Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

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Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:

Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF

d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)

2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.

Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register

c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt

c.

setting a status bit

d. unblocking the interrupts

Twoja odpowiedź jest poprawna.

The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22

Niepoprawnie

Scheduling disk access involves deciding on the following:

a.

which drive should be used next

b. the order in which disk access requests should be handled

c.

about the physical location of the files

d. about the type of disks the system should have

The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 23

Poprawnie

Punkty: 1,00 z 1,00

What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?

Select all correct::

a.

general purpose registers

b. instruction register

c.

collective of individual interrupt mask

d. program counter

Twoja odpowiedź jest poprawna.

The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 24

Niepoprawnie

The resources of the computer system are:

Select all correct::

a.

Files

b. Peripheral devices

c.

User programs

d. Primary memory

Twoja odpowiedź jest niepoprawna.

The correct answers are: Primary memory, Peripheral devices, Files

%%

Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%

Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%

Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%

Pytanie 28
Poprawnie

Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?

a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by
freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region

c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.

The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size

Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::

a.

Can be applied only in distributed systems

b. Stops the processor if 0 is read

c.

It requires processes to actively wait

d. Requires organizing inactive waiting in queues

Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 44

Poprawnie

Punkty: 1,00 z 1,00

SJF selects the task:

a.

who waited the longest in the queue

b. which was last placed in the queue

c.

with the least CPU requirement

d. which was first placed in the queue

The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 45

Poprawnie

Punkty: 1,00 z 1,00

Which of the following statements is true for system level threads?

a.

Kernel-level threads require their descriptors in the kernel.

b. User-level threads can be synchronized by the kernel.

c.

The threading implementation at the kernel level is done by the thread library attached to the program.

d. Multithreaded applications cannot use multiprocessing.

The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 46

Niepoprawnie

Which swapping algorithms use the last reference time?

Select all correct::

a.

working set

b. NRU

c.

LFU

d. FIFO

e.LRU

f.second chance

g.working set clock

Twoja odpowiedź jest niepoprawna.

The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

24/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:

a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.

Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data

The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie

Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.

It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.

The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::

a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.

External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how
long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt

Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU

j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.

FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00

Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.

SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system

The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip
is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second
bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should
be put in the strip on disk 3?
Answer:

0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m

1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:

Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::

a.

occupies a processor

b. waits for an I/O operation to complete

c.

fills the CPU idle time

d. waits for a processor

Twoja odpowiedź jest poprawna.

The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 12

Częściowo poprawnie

Punkty: 0,50 z 1,00

BEST-FIT algorithm:

Select all correct::

a.

Requires sorting the cut part into the list of free blocks

b. It allows for quick determining whether there is a free block of the required size

c.

Avoids external fragmentation

d. Requires a descending sort of the list of free blocks

Twoja odpowiedź jest częściowo poprawna.

Poprawnie wybrałeś (-łaś): 1.

The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut

part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 13

Poprawnie

Punkty: 1,00 z 1,00

The microkernel of the operating system performs the following role:

Select all correct::

a.

Runs programs

b. Synchronizes processes

c.

It receives interrupts and routes them to the appropriate drivers and other layers of the system

Twoja odpowiedź jest poprawna.

The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other

layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 14

Poprawnie

Punkty: 1,00 z 1,00

Two successive executions of operation V in one process on a binary semaphore in down state:

Select all correct::

a.

Raises the semaphore if there are no suspended processes

b. It doesn't change anything

c.

Increases semaphore value by 2

d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.

Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.

Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00

By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:

Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU

c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:

Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address

c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated

b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly

Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12
bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other
registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the
program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.

Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.

current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::

a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.

User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 32

Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 33

Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 34

Poprawnie

Punkty: 1,00 z 1,00

The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies
for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00

What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.

The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.

suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie

Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors

task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU

f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information

b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before processing?
a.
Distributed processing
b. Interactive processing

c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the

appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

9/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::

a.

Controls file access rights

b. It performs directory services in the hierarchy of disk files

c.

It runs programs stored in files

d. Performs file opening and closing operations

Twoja odpowiedź jest poprawna.

The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,

Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 21

Poprawnie

Punkty: 1,00 z 1,00

Devices report their readiness by:

Select all correct::

a.

system call

b. issuing an interrupt

c.

setting a status bit

d. unblocking the interrupts

Twoja odpowiedź jest poprawna.

The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 22

Niepoprawnie

Scheduling disk access involves deciding on the following:

a.

which drive should be used next

b. the order in which disk access requests should be handled

c.

about the physical location of the files

d. about the type of disks the system should have

The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 23

Poprawnie

Punkty: 1,00 z 1,00

What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?

Select all correct::

a.

general purpose registers

b. instruction register

c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30

Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::

a.

External by segmentation

b. Internal by paging

c.

External by resizing allocated blocks

d. Internal by partitioning into quantized blocks

e.

External by freeing blocks in a deallocation order not reverse to allocation

Twoja odpowiedź jest niepoprawna.

The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a

deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 34

Poprawnie

Punkty: 1,00 z 1,00

The direct resume rule means that:

Select all correct::

a.

The resuming process applies for the critical region just like other processes waiting to enter the critical

region

b. The resuming process gets a critical region after the resumed process exits the critical region

c.

The resuming process loses the critical region

Twoja odpowiedź jest poprawna.

The correct answers are: The resuming process loses the critical region, The resuming process applies

for the critical region just

like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 35

Poprawnie

Punkty: 1,00 z 1,00

In a multitasking environment, the operating system decides which task the CPU gets, when, and for how

long. This feature is called:

a.

traffic control

b. task management

c.

task sheduling

d. task timetable management

The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 36

Poprawnie

Punkty: 1,00 z 1,00

After accepting an interrupt, the next interrupts are:

Select all correct::

a.

unblocked

b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance

f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.

d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::

a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.

The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)

b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary

Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

24/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack

Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.

Whether the frame is empty or contains a page

d. Downloads to the memory of the requested page

Twoja odpowiedź jest niepoprawna.

The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 6

Poprawnie

Punkty: 1,00 z 1,00

Discontinuous allocation is the result of:

Select all correct::

a.

relocation

b. compaction

c.

paging

d. segmantation

Twoja odpowiedź jest poprawna.

The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 7

Częściowo poprawnie

Punkty: 0,75 z 1,00

Which of the following information is stored on task switching?

a.

I/O status information

b. Contents of general purpose registers, program counter, and similar registers available to the program

c.

Contents of datum, limit and other registers inaccessible to the program

d. scheduler data

The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the

program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 8

Poprawnie

Punkty: 1,00 z 1,00

The return from interrupt instruction:

Select all correct::

a.

restores the process stack

b. causes the processor to switch to a process other than the interrupted one

c.

restores the conditions register

d. restores the program counter

Twoja odpowiedź jest poprawna.

The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables, associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

5/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie

Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie

Punkty: 1,00 z 1,00

In what states can a task occur?

Select all correct::

a.

current

b. ready

c.

resetted

d. blocked

Twoja odpowiedź jest poprawna.

The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 16

Niepoprawnie

Page thrashing is a phenomenon involving:

Select all correct::

a.

frequent context changes that require page index tables to be reloaded

b. frequent downloading of pages that have just been swapped out from memory

c.

frequently changing the values of bits describing pages in frames

d. loading the same page over and over again

Twoja odpowiedź jest niepoprawna.

The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 17

Poprawnie

Punkty: 1,00 z 1,00

The internal state of the program supervisor layer is available for:

a.

Applications

b. OS kernel

c.

File system layer

d. User programs

The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 18

Niepoprawnie

Dynamic relocation:

Select all correct::

a.

Requires relative references to be addressed when the program is loaded into memory

b. Requires hardware support in the form of a LIMIT register

c.

Requires hardware support in the form of a DATUM register

d. Allows for temporal elimination of external fragmentation

Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts

Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25

Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::

a.
Primary memory
b. Processor time
c.
User programs
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 29
Poprawnie
Punkty: 1,00 z 1,00
The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):
Select all correct::
a.
address translation, page index tables, page reference bits, "frame error" interrupt
b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory
c.
address translation, page index tables, "frame error" interrupt
d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper
Twoja odpowiedź jest poprawna.
The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 30
Poprawnie
Punkty: 1,00 z 1,00
The kernel (microkernel) is responsible for:
Select all correct::
a.
interrupt handling (at the elementary level, then they are passed on to other layers).
b. task control
c.
synchronization of processes and devices with processes
d. memory allocation and freeing
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts

c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical
region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of
the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited
by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read

c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie

Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)

c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

27/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:

thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61

Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
6/19/24, 6:39 PM
Exam 1: Sample Overview
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m

Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system
mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.

The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page
Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie

Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00

In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:
Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything

c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?
Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs

The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:

Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00
Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and
what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.

Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

Twoja odpowiedź jest niepoprawna.

The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,

Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 28

Poprawnie

Punkty: 1,00 z 1,00

The resources of the computer system are:

Select all correct::

a.

Primary memory

b. Processor time

c.

User programs

d. Peripheral devices

Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 29

Poprawnie

Punkty: 1,00 z 1,00

The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):

Select all correct::

a.

address translation, page index tables, page reference bits, "frame error" interrupt

b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory

c.

address translation, page index tables, "frame error" interrupt

d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper

Twoja odpowiedź jest poprawna.

The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 30

Poprawnie

Punkty: 1,00 z 1,00

The kernel (microkernel) is responsible for:

Select all correct::

a.

interrupt handling (at the elementary level, then they are passed on to other layers).

b. task control

c.

synchronization of processes and devices with processes

d. memory allocation and freeing

Twoja odpowiedź jest poprawna.

The correct answers are: task control, synchronization of processes and devices with processes, interrupt

handling (at the
elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 31
Poprawnie
Punkty: 1,00 z 1,00
Which of the following interrupts a running process?
a.
Hardaware interrupt
b. Timer interrupts
c.
Power fail interrupt
d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just
like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37

Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot
be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38
Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.

The correct answers are: FAT table size, The size of the disk space

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait
d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.

working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:
Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait

Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader
d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie

Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.

generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::

a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 61
Niepoprawnie
Punkty: 0,00 z 5,00
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
Started
State
Completed
Time used
Points
Rating
Wednesday, June 19, 2024, 12:15 p.m
Finished
Wednesday, June 19, 2024, 2:08 p.m
1 hour 52 min.
39.75/75.00
21.20 points for 40.00 points achievable (53 %)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 1

Interrupt handling - sequence of actions:
1.saving a copy of the interrupt vector (PC and SR)
2.switching to system mode (modification of PC and status register)
3.programmatic context saving
4.switching to the system stack
Your answer is correct.
The correct answer is: 1. → saving a copy of the interrupt vector (PC and SR), 2. → switching to system

mode (modification of PC and
status register), 3. → programmatic context saving, 4. → switching to the system stack

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 2

What are the functions of the kernel?
and. Memory management
b. File management
c.
Program management
d. Interrupt handling
The correct answer is: Interrupt handling

Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 3

The root directory of the disk should be located:
and. in a permanent place on the disk
b. at a fixed address in main memory
c.
in a place hard-coded in the structures of the operating system
d. in a place designated by the data structure in a fixed location on the disk
The correct answer is: in a place designated by the data structure in a fixed location on the disk

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 4

Virtual memory consists of:
Select all correct:
and. primary memory and cache
b. cache memory and mass storage
c.
primary and mass memory
d. primary memory and cloud storage
Twoja odpowiedź jest poprawna.
The correct answers is: primary and mass memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 5
Niepoprawnie

The page fault interrupt is used to:
Select all correct::
a.
Detection of an attempt to write outside the address space of the frame
b. Detection of an access attempt from a frame not allocated to the program
c.
Whether the frame is empty or contains a page
d. Downloads to the memory of the requested page

Twoja odpowiedź jest niepoprawna.
The correct answers is: Downloads to the memory of the requested page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 6
Poprawnie
Punkty: 1,00 z 1,00
Discontinuous allocation is the result of:
Select all correct::
a.
relocation
b. compaction
c.
paging
d. segmantation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 7
Częściowo poprawnie
Punkty: 0,75 z 1,00
Which of the following information is stored on task switching?
a.
I/O status information
b. Contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of datum, limit and other registers inaccessible to the program
d. scheduler data
The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the
program, Contents of general purpose registers, program counter, and similar registers available to the program

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 8
Poprawnie
Punkty: 1,00 z 1,00
The return from interrupt instruction:
Select all correct::
a.
restores the process stack
b. causes the processor to switch to a process other than the interrupted one
c.
restores the conditions register
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 9
Niepoprawnie

Which mechanisms are supported by the phenomenon of locality of references?
Select all correct::
a.
reverse page index tables
b. multilevel page index tables
c.
page swapping
d. address translation
e.
associative memory of page references
Twoja odpowiedź jest niepoprawna.
The correct answers are: page swapping, multilevel page index tables, reverse page index tables,
associative memory of page
references

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 10
Poprawnie
Punkty: 1,00 z 1,00
What is this technique where the operating system gathers programs and data together before
processing?
a.
Distributed processing
b. Interactive processing
c.
Real-time processing
d. Batch processing
The correct answers is: Batch processing

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 11
Poprawnie
Punkty: 1,00 z 1,00
In the "current" state, there is a process that:
Select all correct::
a.
occupies a processor
b. waits for an I/O operation to complete
c.
fills the CPU idle time
d. waits for a processor
Twoja odpowiedź jest poprawna.
The correct answers is: occupies a processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 12
Częściowo poprawnie
Punkty: 0,50 z 1,00
BEST-FIT algorithm:

Select all correct::
a.
Requires sorting the cut part into the list of free blocks
b. It allows for quick determining whether there is a free block of the required size
c.
Avoids external fragmentation
d. Requires a descending sort of the list of free blocks
Twoja odpowiedź jest częściowo poprawna.
Poprawnie wybrałeś (-łaś): 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size,
Requires sorting the cut
part into the list of free blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 13
Poprawnie
Punkty: 1,00 z 1,00
The microkernel of the operating system performs the following role:
Select all correct::
a.
Runs programs
b. Synchronizes processes
c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system
Twoja odpowiedź jest poprawna.
The correct answers are: Synchronizes processes, It receives interrupts and routes them to the
appropriate drivers and other
layers of the system

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 14
Poprawnie
Punkty: 1,00 z 1,00
Two successive executions of operation V in one process on a binary semaphore in down state:
Select all correct::
a.
Raises the semaphore if there are no suspended processes
b. It doesn't change anything
c.
Increases semaphore value by 2
d. If the semaphore guards a critical region, it can lets two processes enter the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the
critical region, Raises the
semaphore if there are no suspended processes

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 15
Poprawnie
Punkty: 1,00 z 1,00
In what states can a task occur?

Select all correct::
a.
current
b. ready
c.
resetted
d. blocked
Twoja odpowiedź jest poprawna.
The correct answers are: current, ready, blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 16
Niepoprawnie

Page thrashing is a phenomenon involving:
Select all correct::
a.
frequent context changes that require page index tables to be reloaded
b. frequent downloading of pages that have just been swapped out from memory
c.
frequently changing the values of bits describing pages in frames
d. loading the same page over and over again
Twoja odpowiedź jest niepoprawna.
The correct answers is: frequent downloading of pages that have just been swapped out from memory

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Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 17
Poprawnie
Punkty: 1,00 z 1,00
The internal state of the program supervisor layer is available for:
a.
Applications
b. OS kernel
c.
File system layer
d. User programs
The correct answers is: OS kernel

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 18
Niepoprawnie

Dynamic relocation:
Select all correct::
a.
Requires relative references to be addressed when the program is loaded into memory
b. Requires hardware support in the form of a LIMIT register
c.
Requires hardware support in the form of a DATUM register
d. Allows for temporal elimination of external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for

temporal elimination of external
fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 19
Poprawnie
Punkty: 1,00 z 1,00
Paging - the key in associative memory is:
Select all correct::
a.
page number
b. the page number concatenated with the frame number
c.
the frame number concatenated with the page number
d. frame number
Twoja odpowiedź jest poprawna.
The correct answers is: page number

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 20
Poprawnie
Punkty: 1,00 z 1,00
The file system layer plays the following role in the operating system:
Select all correct::
a.
Controls file access rights
b. It performs directory services in the hierarchy of disk files
c.
It runs programs stored in files
d. Performs file opening and closing operations
Twoja odpowiedź jest poprawna.
The correct answers are: Performs file opening and closing operations, It performs directory services in
the hierarchy of disk files,
Controls file access rights

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 21
Poprawnie
Punkty: 1,00 z 1,00
Devices report their readiness by:
Select all correct::
a.
system call
b. issuing an interrupt
c.
setting a status bit
d. unblocking the interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: issuing an interrupt, setting a status bit

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 22
Niepoprawnie

Scheduling disk access involves deciding on the following:
a.
which drive should be used next
b. the order in which disk access requests should be handled
c.
about the physical location of the files
d. about the type of disks the system should have
The correct answers is: the order in which disk access requests should be handled

1
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 23
Poprawnie
Punkty: 1,00 z 1,00
What is included in the context that must be saved for a synchronous (inter-instruction) precision interrupt?
Select all correct::
a.
general purpose registers
b. instruction register
c.
collective of individual interrupt mask
d. program counter
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, collective of individual interrupt mask

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 24
Niepoprawnie

The resources of the computer system are:
Select all correct::
a.
Files
b. Peripheral devices
c.
User programs
d. Primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Primary memory, Peripheral devices, Files

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 25
Poprawnie
Punkty: 1,00 z 1,00

Compaction solves the problem:
Select all correct::
a.
external fragmentation
b. swapping
c.
page fault
d. internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answers is: external fragmentation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 26
Poprawnie
Punkty: 1,00 z 1,00
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception
is raised in system mode?
Select all correct::
a.
initializes the kernel system stack from the scratch
b. switches to the next kernel system stack
c.
switches back to the application program stack
d. nothing special, it builds the context on the kernel system stack
Twoja odpowiedź jest poprawna.
The correct answers is: nothing special, it builds the context on the kernel system stack

1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 27
Niepoprawnie

Opening a file in UNIX writes the following entries in the operating system's data structures:
Select all correct::
a.
Inserting a new item into the Table of Open Files of the Process
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry,
Inserting a new item into the Table of Open Files of the Process

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 28
Poprawnie
Punkty: 1,00 z 1,00
The resources of the computer system are:
Select all correct::
a.
Primary memory

b. Processor time

c.

User programs

d. Peripheral devices

Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Processor time

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 29

Poprawnie

Punkty: 1,00 z 1,00

The hardware mechanisms necessary for paging are ("frame error" also called "page fault", "frame miss"):

Select all correct::

a.

address translation, page index tables, page reference bits, "frame error" interrupt

b. address translation, page index tables, page reference bits, "frame error" interrupt, associative memory

c.

address translation, page index tables, "frame error" interrupt

d. address translation, page index tables, "frame error" interrupt, associative memory, page swapper

Twoja odpowiedź jest poprawna.

The correct answers is: address translation, page index tables, "frame error" interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 30

Poprawnie

Punkty: 1,00 z 1,00

The kernel (microkernel) is responsible for:

Select all correct::

a.

interrupt handling (at the elementary level, then they are passed on to other layers).

b. task control

c.

synchronization of processes and devices with processes

d. memory allocation and freeing

Twoja odpowiedź jest poprawna.

The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the

elementary level, then they are passed on to other layers).

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 31

Poprawnie

Punkty: 1,00 z 1,00

Which of the following interrupts a running process?

a.

Hardaware interrupt

b. Timer interrupts

c.

Power fail interrupt

d. Scheduler
The correct answers are: Hardaware interrupt, Timer interrupts, Power fail interrupt

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 32
Niepoprawnie

a page fault interrupt occurs when:
Select all correct::
a.
the program accesses the page
b. an error has occurred on the current page
c.
the program is accessing a page that is not in the cache
d. the program accesses a page that is not in the primary memory
Twoja odpowiedź jest niepoprawna.
The correct answers is: the program accesses a page that is not in the primary memory

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 33
Niepoprawnie

Fragmentation is implied by:
Select all correct::
a.
External by segmentation
b. Internal by paging
c.
External by resizing allocated blocks
d. Internal by partitioning into quantized blocks
e.
External by freeing blocks in a deallocation order not reverse to allocation
Twoja odpowiedź jest niepoprawna.
The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a
deallocation order not reverse to allocation, External by resizing allocated blocks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 34
Poprawnie
Punkty: 1,00 z 1,00
The direct resume rule means that:
Select all correct::
a.
The resuming process applies for the critical region just like other processes waiting to enter the critical region
b. The resuming process gets a critical region after the resumed process exits the critical region
c.
The resuming process loses the critical region
Twoja odpowiedź jest poprawna.
The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just

like other processes waiting to enter the critical region

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 35
Poprawnie
Punkty: 1,00 z 1,00
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:
a.
traffic control
b. task management
c.
task sheduling
d. task timetable management
The correct answers is: task sheduling

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 36
Poprawnie
Punkty: 1,00 z 1,00
After accepting an interrupt, the next interrupts are:
Select all correct::
a.
unblocked
b. some blocked, some unblocked, developer decides
c.
blocked
d. partly blocked, partly unblocked, according to the level of the accepted interrupt
Twoja odpowiedź jest poprawna.
The correct answers is: blocked

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 37
Poprawnie
Punkty: 1,00 z 1,00
By definition, a deadlock is a situation where:
Select all correct::
a.
exactly one process is waiting for a condition that cannot be met
b. at least two processes are waiting for conditions that cannot be met
c.
any greater than zero number of processes are waiting for conditions that cannot be met
d. any greater than one number of processes are waiting for conditions that cannot be met
Twoja odpowiedź jest poprawna.
The correct answers is: any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 38

Poprawnie
Punkty: 1,00 z 1,00
What mechanism is used to preserve the states of preempted tasks?
a.
batch work
b. context switch
c.
time slice
d. task period
The correct answers is: context switch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 39
Niepoprawnie

In which swapping algorithms is it necessary to clear the M bits individually?
Select all correct::
a.
FIFO
b. working set
c.
no algorithm
d. LRU
e.second chance
f.NRU
g.working set clock
h. clock
i.LFU
j.optimal
Twoja odpowiedź jest niepoprawna.
The correct answers is:
no algorithm

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 40
Niepoprawnie

In a FAT-based disk system, file size is directly limited by:
Select all correct::
a.
The size of the disk space
b. The number of bits of the disk address
c.
The number of bits of the field describing the size of the file
d. Allocation unit size
e.
FAT table size
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 41
Niepoprawnie

In which swapping algorithms is it necessary to collectively clear the bits R?
Select all correct::
a.
second chance
b. NRU
c.
LRU
d. working set
e.LFU
f.no algorithm
g.clock
h. working set
i.
FIFO
Twoja odpowiedź jest niepoprawna.
The correct answers are: NRU, LRU, LFU

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 42
Niepoprawnie

In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:
Select all correct::
a.
FAT table size
b. The number of bits of the field describing the size of the file
c.
The size of the disk space
d. The number of bits of the disk address
e.
Allocation unit size
Twoja odpowiedź jest niepoprawna.
The correct answers are: FAT table size, The size of the disk space

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 43
Poprawnie
Punkty: 1,00 z 1,00
Using Test-And-Set or Compare-And-Swap in synchronization:
Select all correct::
a.
Can be applied only in distributed systems
b. Stops the processor if 0 is read
c.
It requires processes to actively wait

d. Requires organizing inactive waiting in queues
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 44
Poprawnie
Punkty: 1,00 z 1,00
SJF selects the task:
a.
who waited the longest in the queue
b. which was last placed in the queue
c.
with the least CPU requirement
d. which was first placed in the queue
The correct answers is: with the least CPU requirement

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 45
Poprawnie
Punkty: 1,00 z 1,00
Which of the following statements is true for system level threads?
a.
Kernel-level threads require their descriptors in the kernel.
b. User-level threads can be synchronized by the kernel.
c.
The threading implementation at the kernel level is done by the thread library attached to the program.
d. Multithreaded applications cannot use multiprocessing.
The correct answers is: Kernel-level threads require their descriptors in the kernel.

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 46
Niepoprawnie

Which swapping algorithms use the last reference time?
Select all correct::
a.
working set
b. NRU
c.
LFU
d. FIFO
e.LRU
f.second chance
g.working set clock
Twoja odpowiedź jest niepoprawna.
The correct answers are: working set, working set clock

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 47
Poprawnie
Punkty: 1,00 z 1,00
When the processor is released, the scheduler selects one of the queued processes:

Select all correct::
a.
suspended
b. running
c.
ready
d. waiting
Twoja odpowiedź jest poprawna.
The correct answers is: ready

2

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 48
Niepoprawnie

What type of code can be executed simultaneously on multiple processors?
Select all correct::
a.
self-modifying
b. reentrant
c.
dynamically relocated
d. binary
Twoja odpowiedź jest niepoprawna.
The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 49
Poprawnie
Punkty: 1,00 z 1,00
Using the Test-And-Set instruction in synchronization:
Select all correct::
a.
Requires an explicit relinquishment of the processor to another process
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. It requires processes to actively wait
Twoja odpowiedź jest poprawna.
The correct answers is: It requires processes to actively wait

24/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 50
Częściowo poprawnie
Punkty: 0,50 z 1,00
Static relocation is performed by:
a.
Segment descriptors
b. Special registers (DATUM)
c.
Loader

d. Compiler
The correct answers are: Compiler, Loader

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 51
Poprawnie
Punkty: 1,00 z 1,00
The segment descriptor table contains:
Select all correct::
a.
address of the segment page index table of the bottom-level (last level) in the hierarchy
b. addresses of all segment page index tables
c.
address of the segment page index table of the top-level (first level) in the hierarchy
Twoja odpowiedź jest poprawna.
The correct answers is: address of the segment page index table of the top-level (first level) in the
hierarchy

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 52
Poprawnie
Punkty: 1,00 z 1,00
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select all correct::
a.
time slicing
b. priority
c.
SJF
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answers is: SJF

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 53
Poprawnie
Punkty: 1,00 z 1,00
In indulgent scheduling, the process keeps the CPU until:
Select all correct::
a.
next interrupt from the timer
b. next interrupt from the device
c.
termination
d. waiving
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 54
Poprawnie
Punkty: 1,00 z 1,00
A process can appear in the pool of scheduling processes as a result of:
Select all correct::
a.
Starting a new process
b. Completing an I/O operation
c.
Performing V operation on the semaphore
d. Performing the P operation on the semaphore
Twoja odpowiedź jest poprawna.
The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55
Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
Twoja odpowiedź jest niepoprawna.
The correct answers is: internal fragmentation

27/326/19/24, 6:39 PM
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 56
Niepoprawnie

MMU uses index tables to:
Select all correct::
a.
generate a relative address
b. generate a physical address
c.
generate an effective address
d. generate a logical address
Twoja odpowiedź jest niepoprawna.
The correct answers is: generate a physical address

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 57
Niepoprawnie

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Odpowiedź:
thrashing

The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 58

Poprawnie

Punkty: 1,00 z 1,00

Address translation mechanism:

Select all correct::

a.

Adds the frame number to the page number

b. Concatenates the frame number and page number

c.

Concatenates the frame number and offset on the page

d. Concatenates the page number and page offset

Twoja odpowiedź jest poprawna.

The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 59

Poprawnie

Punkty: 1,00 z 1,00

Static relocation is performed by:

a.

Special registers (DATUM)

b. Segment descriptors

c.

Linker

d. Paging system

The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 60

Niepoprawnie

What type of code can multiple processes execute simultaneously?

Select all correct::

a.

dynamically relocated

b. self-modifying

c.

binary

d. reentrant

Twoja odpowiedź jest niepoprawna.

The correct answers is: reentrant

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 61

Niepoprawnie

Punkty: 0,00 z 5,00

What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3,94,42,11,8
Odpowiedź:3.375

The correct answers is: 4,0

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 62
Niepoprawnie
Punkty: 0,00 z 5,00
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips
divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
01001Parity disk
00000Disk 3
10110Disk 2
11010Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odds. Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
0

The correct answer is: 10110

3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Question 63
Incorrectly
Points: 0.00 out of 5.00
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits,
and all entries in the TIS page index table are on a 4-byte word boundary , enter:
- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 55

Niepoprawnie

The common allocation queue to fixed blocks of memory of equal size causes:
Select all correct::
a.
need for compaction
b. internal fragmentation
c.
external fragmentation
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Niepoprawnie

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Odpowiedź:
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The correct answers is: anomaly

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
Pytanie 58
Poprawnie
Punkty: 1,00 z 1,00
Address translation mechanism:
Select all correct::
a.
Adds the frame number to the page number
b. Concatenates the frame number and page number
c.
Concatenates the frame number and offset on the page
d. Concatenates the page number and page offset
Twoja odpowiedź jest poprawna.
The correct answers is: Concatenates the frame number and offset on the page

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 59
Poprawnie
Punkty: 1,00 z 1,00
Static relocation is performed by:
a.
Special registers (DATUM)
b. Segment descriptors
c.
Linker
d. Paging system
The correct answers is: Linker

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Pytanie 60
Niepoprawnie

What type of code can multiple processes execute simultaneously?
Select all correct::
a.
dynamically relocated
b. self-modifying
c.
binary
d. reentrant
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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

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Niepoprawnie
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3
Exam 1: Sample Overview

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
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- TIS maximum size of the program in kB
Answer:
8192

The correct answer is: 8

32/32
###

###
###############   File: ExamExam.txt #########
###
Question 1
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The page fault interrupt is used to:
Question 1Select one or more:
a.
Detection of an attempt to write outside the address space of the frame
b.
Whether the frame is empty or contains a page
c.
Downloads to the memory of the requested page
d.
Detection of an access attempt from a frame not allocated to the program

Question 2
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The following situations trigger "error" exceptions:
Question 2Select one or more:

a.
memory reference in the area of the page that is not in memory

b.
memory reference beyond limit register value

c.
a reference to memory that is not in the program address space

d.
an attempt to execute an instruction from the area of the page for which the "no code" bit was set

Question 3
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Which of the following information is stored on task switching?
Question 3Answer

a.
Contents of the instruction register and similar registers

b.
contents of general purpose registers, program counter, and similar registers available to the
program

c.
scheduler data

d.
I/O status information

Question 4
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What can happen when a job leaves the critical section and more than 1 task is waiting for the
critical section?
Question 4Select one or more:

a.
starvation awaiting a critical section

b.
letting both tasks into the critical section

c.

deadlock waiting for critical section

d.active waiting for a critical section

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: starvation awaiting a critical section

Question 5

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

The root directory of the disk should be located:

Question 5Answer

a.

in a place hard-coded in the structures of the operating system

b.

in a permanent place on the disk

c.

at a fixed address in main memory

d.

in a place designated by the data structure in a fixed location on the disk

Feedback

The correct answer is: in a place designated by the data structure in a fixed location on the disk

Question 6

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Which of the following information is stored on task switching?

Question 6Answer

a.

Contents of datum, limit and other registers inaccessible to the program

b.

Contents of general purpose registers, program counter, and similar registers available to the program

c.

I/O status information

d.scheduler data

Feedback

The correct answers are: I/O status information, scheduler data, Contents of datum, limit and other registers inaccessible to the program, Contents of general purpose registers, program counter, and similar registers available to the program

Question 7

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

What mechanism is part of time-sharing systems?

Question 7Answer

a.

medium-level scheduler

b.

low-level scheduler

c.

swapping

d.

high-level scheduler
Feedback
The correct answer is: low-level scheduler
Question 8
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
In a FAT-based disk system, file size is directly limited by:
Question 8Select one or more:
a.
The number of bits of the disk address
b.
The number of bits of the field describing the size of the file
c.
The size of the disk space
d.
FAT table sizee.
Allocation unit size
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answers are: The size of the disk space, The number of bits of the field describing the size of the file
Question 9
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Which technique was introduced because a single task could occupy both the CPU and I/O devices?
Question 9Select one or more:
a.
Buffering
b.
Multiprogramming
c.
Preemptive scheduling
d.
Interrupts
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answer is: Interrupts
Question 10
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Individual interrupt mask:
Question 10Select one or more:
a.
register in which addresses of devices reporting individual interrupts are stored
b.
a combinational circuit that calculates the number of the interrupt receivedc.
a register whose bits are ORed (alternative) with the bits from the interrupt request register
d.

a register whose bits are ANDed (conjunction) with the bits from the interrupt request register
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: a register whose bits are ANDed (conjunction) with the bits from the interrupt request register
Question 11
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Which swapping algorithms use the current time slice number?
Question 11Select one or more:
a.
FIFO
b.
LRU
c.
no algorithm
d.
clock
e.
working set
f.
LFU
g.
optimal
h.
second chance
i.
NRU
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answers are: second chance, working setQuestion 12
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Paging - two-level index tables mode of operation
Question 12Select one or more:
a.
The content of a level 1 table element points to a level 2 table
b.
The content of a level 1 table element is an index in a level 2 table
c.
The content of a level 1 table element points to a level 2 table
d.
The content of the level 1 table element is concatenated (combined) with the content of the level 2 table element
Feedback
Twoja odpowiedź jest niepoprawna.
The correct answer is: The content of a level 1 table element points to a level 2 table
Question 13
Correct
Mark 1.00 out of 1.00
Flag question

Question text
What is a scheduler?
Question 13Select one or more:
a.
the system process that allocates the processor
b.
memory allocation procedure
c.
a kernel routine that selects a task to execute
d.
procedure that schedules frame release in the page replace algorithm
Feedback
Twoja odpowiedź jest poprawna.The correct answer is: a kernel routine that selects a task to execute
Question 14
Correct
Mark 1.00 out of 1.00
Flag question
Question text
In indulgent scheduling, the process keeps the CPU until:
Question 14Select one or more:
a.
termination
b.
waiving
c.
next interrupt from the device
d.
next interrupt from the timer
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: waiving, termination
Question 15
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
How does the operating system call the task completion subroutine?
Answer 1 Question 15Choose...recreates the context programmatically and executes the IRET
2. instructionsets the trace in the terminating subroutine to the current positionbuilds the frame of
the terminating subroutine on the task stackbuilds an interrupt vector on the system stack
pointing to the terminating subroutine code
Answer 2 Question 15Choose...recreates the context programmatically and executes the IRET
4. instructionsets the trace in the terminating subroutine to the current positionbuilds the frame of
the terminating subroutine on the task stackbuilds an interrupt vector on the system stack
pointing to the terminating subroutine code
Answer 3 Question 15Choose...recreates the context programmatically and executes the IRET
3. instructionsets the trace in the terminating subroutine to the current positionbuilds the frame of
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1. Answer 4 Question 15Choose...recreates the context programmatically and executes the
IRETinstructionsets the trace in the terminating subroutine to the current positionbuilds the frame of
the terminating subroutine on the task stackbuilds an interrupt vector on the system stack
pointing to the terminating subroutine code
Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.
The correct answer is: 2. → sets the trace in the terminating subroutine to the current position, 4. → recreates the context programmatically and executes the IRET instruction, 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code, 1. → builds the frame of the terminating subroutine on the task stack

Question 16
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Two successive executions of operation V in one process on a binary semaphore in down state:
Question 16Select one or more:
a.
Raises the semaphore if there are no suspended processes
b.
Increases semaphore value by 2
c.
It doesn't change anything
d.
If the semaphore guards a critical region, it can lets two processes enter the critical region
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the semaphore if there are no suspended processes

Question 17
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What does the kernel do when there is no task (process) to run?
Question 17Select one or more:a.
resets the entire system
b.
executes an infinite loop in the kernel until a task arrives
c.
starts the idle task
d.
switches off the power supply
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: starts the idle task

Question 18
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Address translation mechanism:
Question 18Select one or more:
a.
concatenates the frame number and page number
b.
concatenates the frame number and offset on the page
c.
adds the frame number to the page number
d.

concatenates the page number and page offset

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answer is: concatenates the frame number and offset on the page

Question 19

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

Physical address:

Question 19Select one or more:a.

indicates a relative address to the segment register

b.

points to a location in the address space of primary memory

c.

points to a cell in the process address space

d.

is contained in the address field of the instruction

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answer is: points to a location in the address space of primary memory

Question 20

Correct

Mark 1.00 out of 1.00

Flag question

Question text

The operating system plays the following role in a computer system:

Question 20Select one or more:

a.

relational database management

b.

computer system resource management

c.

compiling and running programs

d.

Create a concurrent environment

Feedback

Twoja odpowiedź jest poprawna.

The correct answers are: Create a concurrent environment, computer system resource management

Question 21

Correct

Mark 1.00 out of 1.00

Flag question

Question text

MMU uses index tables to:Question 21Select one or more:

a.

generate a relative address

b.

generate a physical address

c.

generate an effective address

d.

generate a logical address

Feedback

Twoja odpowiedź jest poprawna.
The correct answer is: generate a physical address
Question 22
Correct
Mark 1.00 out of 1.00
Flag question
Question text
What mechanism is used to save and restore the task state?
Question 22Answer
a.
context switch
b.
task descriptor
c.
scheduling data
d.
applications counter
Feedback
The correct answer is: context switch
Question 23
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Discontinuous allocation is the result of:
Question 23Select one or more:a.
segmantation
b.
paging
c.
relocation
d.
compaction
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmantation
Question 24
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Internal fragmentation consists in:
Question 24Select one or more:
a.
Discontinuous program memory allocation
b.
The program does not use all the memory allocated to it
c.
Dividing the memory allocated to the program into a data area and a code area
d.
Free memory blocks between allocated blocks
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: The program does not use all the memory allocated to it
Question 25

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

The following paging exceptions allow for returning to the program after they occur:

Question 25Select one or more:a.

interrupt on write (IOW)

b.

page fault

c.

attempting to write to a write-protected frame

d.

attempt to read from the frame storing the code

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: page fault, interrupt on write (IOW)

Question 26

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Static relocation is performed by:

Question 26Answer

a.

Special registers (LIMIT)

b.

Paging system

c.

Segment descriptors

d.

Loader

Feedback

The correct answer is: Loader

Question 27

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

For address translation, the following is used:

Question 27Select one or more:

a.index table

b.

reference and protection bits

c.

translation register

d.

associative translation buffer

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: index table, associative translation buffer

Question 28

Partially correct

Mark 0.50 out of 1.00

Flag question

Question text

Static relocation is performed by:

a.

Segment descriptors

b.

Paging system

c.

Linker

d.

Compiler

Feedback

The correct answers are: Compiler, Linker

Question 29

Correct

Mark 1.00 out of 1.00

Flag question

Question text

In UNIX, access rights are specified:

Question 29Select one or more:

a.

At the same time, for all files in a given directory owned by the userb.

Individually for each file

c.

Separately for write, read and execute/search

d.

Separately for the user, the group to which the user belongs and for all others

Feedback

Twoja odpowiedź jest poprawna.

The correct answers are: Individually for each file, Separately for the user, the group to which the user belongs and for all others, Separately for write, read and execute/search

Question 30

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Calling the program with the "exec" operation results in (accurately to the result of the exec operation):

Question 30Select one or more:

a.

Loading a code segment from disk, duplicating the data segment of the calling process

b.

Loading code and data segments from disk, initializing a new stack segment

c.

Loading a code segment from disk, duplicating data segments and the calling process stack

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: Loading code and data segments from disk, initializing a new stack segment

Question 31

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Scheduler function is:

Question 31Answera.

selecting a task to run
b.
scheduling tasks on the processor
c.
counting the CPU time used by tasks
d.
changing task priorities
Feedback
The correct answer is: selecting a task to run
Question 32
Correct
Mark 1.00 out of 1.00
Flag question
Question text
In the philosophers problem, if there are 4 of them:
Question 32Select one or more:
a.
Starvation is possible
b.
Deadlock is possible
c.
Deadlock is not possible
d.
Starvation is not possible
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: Deadlock is possible, Starvation is not possible
Question 33
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The kernel (microkernel) is responsible for:
Question 33Select one or more:a.
memory allocation and freeing
b.
synchronization of processes and devices with processes
c.
interrupt handling (at the elementary level, then they are passed on to other layers).
d.
task control
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes,
interrupt handling (at the elementary level, then they are passed on to other layers).
Question 34
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The software resources of a computer system are:
Question 34Select one or more:
a.
Primary memory
b.

Files
c.
Semaphores
d.
Buffers
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: Files, Buffers, Semaphores
Question 35
Partially correct
Mark 0.50 out of 1.00
Flag question
Question text
Which of the following memory allocation schemes causes external fragmentation?Question 35Answer
a.
Sweeping
b.
Multiple contiguous fixed partitions of equal size
c.
Multiple contiguous fixed partitions of various sizes
d.
Paging
Feedback
The correct answers are: Sweeping, Multiple contiguous fixed partitions of various sizes
Question 36
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Dynamic relocation is performed by:
Question 36Answer
a.
Special registers (DATUM)
b.
Loader
c.
Linker
d.
Compiler
Feedback
The correct answer is: Special registers (DATUM)
Question 37
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Can the exchange algorithm: selecting a frame to empty and loading a new page, be performed in user mode?
Question 37Answer
TrueFalse
Feedback
The correct answer is 'True'.
Question 38
Correct
Mark 1.00 out of 1.00

Flag question
Question text
To end the interrupt service, use the following instruction:
Question 38Select one or more:
a.
regular jump instruction
b.
special return instruction
c.
none - the processor will end the service automatically
d.
return from subroutine call
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: special return instruction
Question 39
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Using the Test-And-Set instruction in synchronization:
Question 39Select one or more:
a.
Stops the processor if 0 is read
b.
Requires organizing inactive waiting in queues
c.
It requires processes to actively wait
Feedback
Twoja odpowiedź jest poprawna.The correct answer is: It requires processes to actively wait
Question 40
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The Test-And-Set or Compare-And-Swap instruction has the following characteristics:
Question 40Select one or more:
a.
Requires active waiting from tasks
b.
It is possible to deadlock with TAS/CAS operations on multiple variables
c.
It is possible to use only on computers with common memory
d.
It is possible to use only in 1-processor systems
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: Requires active waiting from tasks, It is possible to use only on computers with common memory, It is possible to deadlock with TAS/CAS operations on multiple variables
Question 41
Correct
Mark 1.00 out of 1.00
Flag question
Question text

Interrupt mask:
Question 41Select one or more:
a.
must be part of the status register
b.
can unblock interrupts when the interrupt handler completes
c.
causes interrupts to be disabled when an interrupt is accepted
d.
can be set and reset by special processor instructionsFeedback
Twoja odpowiedź jest poprawna.
The correct answers are: causes interrupts to be disabled when an interrupt is accepted, can unblock interrupts when the interrupt handler completes, can be set and reset by special processor instructions
Question 42
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Allocation unit for file storage:
Question 42Answer
a.
must be constant across the disk partition
b.
may be a variable in a partition
c.
may differ between files on a partition
d.
It should be selected to match the characteristics of the data
Feedback
The correct answer is: must be constant across the disk partition
Question 43
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Allocation unit for storing files:
Question 43Answer
a.
may vary between partitions
b.
may differ between files in a partition
c.
must be constant across the disk partition
d.
it should be selected to match the characteristics of the dataFeedback
The correct answers are: must be constant across the disk partition, may vary between partitions
Question 44
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
Which swapping algorithms use page reference history?
Question 44Select one or more:
a.

NRU

b.

LRU

c.

FIFO

d.

working set

e.

working set clock

f.

LFU

g.

second chance

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: LRU, LFU

Question 45

Correct

Mark 1.00 out of 1.00

Flag question

Question text

What type of code can multiple processes execute simultaneously?

Question 45Select one or more:

a.

dynamically relocated

b.reentrant

c.

binary

d.

self-modifying

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: reentrant

Question 46

Correct

Mark 1.00 out of 1.00

Flag question

Question text

The thread is also called:

Question 46Answer

a.

overlay process

b.

lightweight process

c.

heavy process

d.

data process

Feedback

The correct answer is: lightweight process

Question 47

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Round-robin scheduling is the best mechanism for:
Question 47Select one or more:
a.
time-sharing system
b.
real-time systemc.
system with different classes of tasks
d.
every system
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: time-sharing system
Question 48
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Context switch is:
Question 48Select one or more:
a.
calling the kernel of the operating system
b.
switching to the system stack
c.
extracode execution
d.
writing registers to the task stack and retrieving them from another task stack
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: writing registers to the task stack and retrieving them from another task stack
Question 49
Correct
Mark 1.00 out of 1.00
Flag question
Question text
The following situations cause the exceptions (processor internal interrupts) of the "error" type:
Question 49Select one or more:
a.
memory reference beyond limit register value
b.an attempt to write to the page for which the "read only" bit is set
c.
memory reference in the area of the page that is not in memory
d.
a reference to memory that is not in the address space
Feedback
Twoja odpowiedź jest poprawna.
The correct answers are: a reference to memory that is not in the address space, memory reference beyond limit register value, an attempt to write to the page for which the "read only" bit is set
Question 50
Correct
Mark 1.00 out of 1.00
Flag question
Question text

A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Question 50Select one or more:

a.
sweeping

b.
paging

c.
swapping

d.
mapping

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is: paging

Question 51

Partially correct

Mark 0.50 out of 1.00

Flag question

Question text

Separate allocation queues for fixed memory blocks of equal size cause:

Question 51Select one or more:a.
need for compaction

b.
internal fragmentation

c.
external fragmentation

Feedback

Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: internal fragmentation, external fragmentation

Question 52

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

A multiuser system is one that, in principle:

Question 52Select one or more:

a.
Requires the use of timer interrupts

b.
Must be multi-threaded

c.
Allows multiple processes to actually run simultaneously

d.
Must be concurrent

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: Must be concurrent, Requires the use of timer interrupts

Question 53

Incorrect

Mark 0.00 out of 1.00

Flag question

Question text

In which swapping algorithms is it necessary to collectively clear the M-bits?

Question 53Select one or more:

a.no algorithm

b.

clock

c.

FIFO

d.

NRU

e.

working set

f.

LFU

g.

second chance

h.

LRU

i.

working set clock

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answer is:

no algorithm

Question 54

Correct

Mark 1.00 out of 1.00

Flag question

Question text

Interrupt request register is:

Question 54Select one or more:

a.

a register that blocks or unblocks all interrupts

b.

a combinational circuit that calculates the number of the interrupt received

c.

a register where interrupt line states are stored

d.

a register that blocks or unblocks individual interruptsFeedback

Twoja odpowiedź jest poprawna.

The correct answer is: a register where interrupt line states are stored

Question 55

Partially correct

Mark 0.50 out of 1.00

Flag question

Question text

The internal state of the file system layer is available for:

Question 55Answer

a.

OS kernel

b.

Program supervisor layer

c.

User programs

d.

Applications

Feedback

The correct answers are: OS kernel, Program supervisor layer

Question 56
Correct
Mark 1.00 out of 1.00
Flag question
Question text
"Soft" real-time system:
Question 56Select one or more:
a.
Guaranteed response time
b.
Guarantees average response time
c.
Guarantees interrupt handling time
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: Guarantees average response timeQuestion 57
Correct
Mark 1.00 out of 1.00
Flag question
Question text
At the suspended state is a process that:
Question 57Select one or more:
a.
waits for an I/O operation to complete
b.
fills the processor idle time
c.
waits for a processor
d.
occupies a processor
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: waits for an I/O operation to complete
Question 58
Correct
Mark 1.00 out of 1.00
Flag question
Question text
Processor access scheduling decisions may be made under which of the following circumstances?
Question 58Select one or more:
a.
When a task goes from the waiting state to the ready state
b.
When a task transitions from the active state to the ready state
c.
When a task terminates
d.
When a task goes from the active state to the waiting state
Feedback
Twoja odpowiedź jest poprawna.The correct answers are: When a task goes from the active state to the
waiting state, When a task
transitions from the active state to the ready state, When a task goes from the waiting state to the
ready state, When a task terminates
Question 59
Correct

Mark 1.00 out of 1.00
Flag question
Question text
The key in associative memory is:
Question 59Select one or more:
a.
Frame number
b.
The frame number concatenated with the page number
c.
Page number
d.
The page number concatenated with the frame number
Feedback
Twoja odpowiedź jest poprawna.
The correct answer is: Page number
Question 60
Incorrect
Mark 0.00 out of 1.00
Flag question
Question text
The sweeping mechanism consists in:
Question 60Select one or more:
a.
Loading segments into primary memory and sending them to disk
b.
Moving programs around in memory to eliminate fragmentation
c.
Merging adjacent free memory blocks
d.
Loading pages into the primary memory and sending them to the diskFeedback
Twoja odpowiedź jest niepoprawna.
The correct answer is: Loading segments into primary memory and sending them to disk
Question 61
Correct
Mark 5.00 out of 5.00
Flag question
Question text
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 3 processors
task
1
processing time 3.3
234
5.22.31.5
Answer:Question 61
Feedback
The correct answer is: 3.5
Question 62
Incorrect
Mark 0.00 out of 5.00
Flag question
Question text
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent
strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds

the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:
the start of strips 0,1,2,3 looks like this:
11100Parity disk
00000Disk 3
10010Disk 2
10110Disk 1
01100Disk 0In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits
0-3 even.
Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:Question 62
Feedback
The correct answer is: 10100
Question 63
Correct
Mark 5.00 out of 5.00
Flag question
Question text
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 12 bits, the frame number is 12 bits, and all entries in the TIS page index table are on a 2-byte word boundary, specify:
- the maximum size of the program's virtual memory in MB
Answer:Question 63
Feedback
The correct answer is: 8
##

##
##############   File: AhsanTest2.txt #########
##
The system stack must provide space for:
Select one or more:
a.
Processor registers in as many copies as there are devices in the system +1
b. Processor registers in as many copies as there are interrupt lines and possible software interrupts
c.
CPU registers
d. Processor registers in as many copies as there are interrupt lines +1
Twoja odpowiedź jest poprawna.
The correct answer is: Processor registers in as many copies as there are interrupt lines +1

Twice consecutive execution in one process of operation P on a raised binary semaphore:
Select one or more:
a.
It doesn't change anything
b. Causes the semaphore to get down
c.
If a semaphore guards a critical region, it leads to a deadlock
d. Decreases semaphore value by 2
Twoja odpowiedź jest poprawna.
The correct answers are: If a semaphore guards a critical region, it leads to a deadlock, Causes the semaphore to get down

n UNIX, access rights are attributes:
Select one or more:
a.
A special table specifying access rights
b. User descriptor
c.
A directory entry for a file
d. An entry in the I-node table
Twoja odpowiedź jest poprawna.
The correct answer is: An entry in the I-node table

he kernel (microkernel) is responsible for:
Select one or more:
a.
memory allocation and freeing
b. interrupt handling (at the elementary level, then they are passed on to other layers).
c.
synchronization of processes and devices with processes
d. task control
Twoja odpowiedź jest poprawna.
The correct answers are: task control, synchronization of processes and devices with processes, interrupt handling (at the elementary
level, then they are passed on to other layers).

n multi-level interrupts (vectored interrupts) the jump is performed:
Select one or more:
a.
to the address specified in the given processor register
b. to a fixed address
c.
to the address contained in the device driver, provided by the I/O instruction
d. according to the table indexed by the interrupt number
Twoja odpowiedź jest poprawna.
The correct answer is: according to the table indexed by the interrupt number

n UNIX, the disk contains the following areas:
Select one or more:
a.
Files data
b. I-node table
c.
Directories
d. SuperBlock
Twoja odpowiedź jest poprawna.
The correct answers are: SuperBlock, I-node table, Files data

What is this technique where the operating system gathers programs and data together before processing?
a.
Batch processing
b. Real-time processing
c.
Distributed processing

d. Interactive processing
The correct answer is: Batch processing

The page fault interrupt is used to:
Select one or more:
a.
Detection of an attempt to write outside the address space of the frame
b. Whether the frame is empty or contains a page
c.
Downloads to the memory of the requested page
d. Detection of an access attempt from a frame not allocated to the program
Twoja odpowiedź jest poprawna.
The correct answer is: Downloads to the memory of the requested page

Scheduling algorithms can be:
a.
interrupting
b. term changing
c.
indulgent
d. preemptive
The correct answers are: indulgent, preemptive

The resources of the computer system are:
Select one or more:
a.
Primary memory
b. User programs
c.
Processor time
d. Peripheral devices
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 2.
The correct answers are: Primary memory, Peripheral devices, Processor time

When is the scheduler called?
Select one or more:
a.
at the request of a user task
b. when the scheduler decides itself
c.
at the end of the execution of each kernel procedure
d. at the start of execution of each kernel procedure
Twoja odpowiedź jest poprawna.
The correct answer is: at the end of the execution of each kernel procedure

A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:
Select one or more:
a.
paging

b. mapping

c.
fragmentation

d. swapping

Twoja odpowiedź jest poprawna.

The correct answer is: paging

What does the file system layer do?

a.
Manages files

b. Manages remote file systems

c.
Manages remote files

d. Manages relationships between files

The correct answer is: Manages files

ndulgent scheduling is the best mechanism for:

Select one or more:

a.
system with many process classes

b. time-sharing system

c.
real-time system

d. every system

Twoja odpowiedź jest poprawna.

The correct answer is: real-time system

What does the kernel do when there is no task (process) to run?

Select one or more:

a.
switches off the power supply

b. resets the entire system

c.
executes an infinite loop in the kernel until a task arrives

d. starts the idle task

Twoja odpowiedź jest poprawna.

The correct answer is: starts the idle task

The internal state of the program supervisor layer is available for:

a.
OS kernel

b. Applications

c.
File system layer

d. User programs

The correct answer is: OS kernel

Discontinuous allocation is the result of:

Select one or more:

a.
compacting
b. paging
c.
reloaction
d. segmentation
Twoja odpowiedź jest poprawna.
The correct answers are: paging, segmentation

Paging is in thrashing if:
a.
the system spends more time paging than execution
b. the system spends less time paging than execution
c.
page faults occur
d. page cannot be swapped
The correct answer is: the system spends more time paging than execution

The return from interrupt instruction:
Select one or more:
a.
restores the process stack
b. restores the conditions register
c.
causes the processor to switch to a process other than the interrupted one
d. restores the program counter
Twoja odpowiedź jest poprawna.
The correct answers are: restores the program counter, restores the conditions register

Dynamic relocation requires the use of:
Select one or more:
a.
base register (DATUM)
b. status register
c.
program counter
d. limit register
Twoja odpowiedź jest niepoprawna.
The correct answer is: base register (DATUM)

A program compiled for execution in paged memory can be executed in regular memory.
True
False
The correct answer is 'False'.

Page thrashing is a phenomenon involving:
Select one or more:
a.
frequent downloading of pages that have just been swapped out from memory
b. loading the same page over and over again
c.

frequent context changes that require page index tables to be reloaded
d. frequently changing the values of bits describing pages in frames
Twoja odpowiedź jest niepoprawna.
The correct answer is: frequent downloading of pages that have just been swapped out from memory

Semaphores are used to solve the problem:
a.
races
b. mutual exclusion
c.
process scheduling
d. Belady problem
The correct answer is: mutual exclusion

Dirty frame is:
Select one or more:
a.
modified
b. candidate to be swapped first
c.
read-only frame, tried to be written to
d. execute-only frame, tried to be read
Twoja odpowiedź jest poprawna.
The correct answer is: modified

The common allocation queue to fixed blocks of memory of equal size causes:
Select one or more:
a.
need for compaction
b. external fragmentation
c.
internal fragmentation
Twoja odpowiedź jest poprawna.
The correct answer is: internal fragmentation

Which scheduler needs to make a decision the fastest?
a.
medium-term
b. long-term
c.
short-term
d. additional
The correct answer is: short-term

In operating system:
Select one or more:
a.
timer interrupt may not be handled

b. some exceptions are handled, some not

c.
the decision to handle an exception or not is made dynamically

d. every exception must be handled

Twoja odpowiedź jest poprawna.

The correct answer is: every exception must be handled

Static relocation is performed by:

a.
Linker

b. Compiler

c.
Segment descriptors

d. Paging system

The correct answers are: Compiler, Linker

Operation V on a raised binary semaphore:

Select one or more:

a.
Increases semaphore value by 1

b. It does not change the value of the semaphore

c.
It is stored in order to be able to perform as many operations P as there were V

Twoja odpowiedź jest poprawna.

The correct answer is: It does not change the value of the semaphore

Fragmentation is implied by:

Select one or more:

a.
Internal by partitioning into quantized blocks

b. External by resizing allocated blocks

c.
External by segmentation

d. Internal by paging

e.
External by freeing blocks in a deallocation order not reverse to allocation

Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: Internal by paging, Internal by partitioning into quantized blocks, External by freeing blocks in a deallocation
order not reverse to allocation, External by resizing allocated blocks

A process can appear in the pool of scheduling processes as a result of:

Select one or more:

a.
Performing the P operation on the semaphore

b. Performing V operation on the semaphore

c.
Completing an I/O operation

d. Starting a new process

Twoja odpowiedź jest poprawna.

The correct answers are: Performing V operation on the semaphore, Starting a new process, Completing an I/O operation

External fragmentation can be avoided by:
Select one or more:
a.
Freeing memory blocks in the reverse order to allocation
b. Freeing memory blocks in allocation order
c.
Application of the onion algorithm
d. Allocation of fixed size static memory blocks
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 1.
The correct answers are: Allocation of fixed size static memory blocks, Freeing memory blocks in the reverse order to allocation

The Test-And-Set or Compare-And-Swap instruction has the following characteristics:
Select one or more:
a.
It is possible to use only in 1-processor systems
b. It is possible to use only on computers with common memory
c.
Requires active waiting from tasks
d. It is possible to deadlock with TAS/CAS operations on multiple variables
Twoja odpowiedź jest poprawna.
The correct answers are: Requires active waiting from tasks, It is possible to use only on computers with common memory, It is possible to
deadlock with TAS/CAS operations on multiple variables

Using the Test-And-Set instruction in synchronization:
Select one or more:
a.
It requires processes to actively wait
b. Stops the processor if 0 is read
c.
Requires organizing inactive waiting in queues
d. Requires the use of semaphores
Twoja odpowiedź jest poprawna.
The correct answer is: It requires processes to actively wait

Address translation is handled by a unit called (give the abbreviation):
Answer:
MMU (Memory Management Unit)

The correct answer is: MMU

Dynamic relocation:
Select one or more:
a.
Requires hardware support in the form of a LIMIT register

b. Requires hardware support in the form of a DATUM register
c.
Allows for temporal elimination of external fragmentation
d. Requires relative references to be addressed when the program is loaded into memory
Twoja odpowiedź jest niepoprawna.
The correct answers are: Requires hardware support in the form of a DATUM register, Allows for
temporal elimination of external
fragmentation

pening a file in UNIX writes the following entries in the operating system's data structures:
Select one or more:
a.
Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry
b. Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

c.
Inserting a new item into the Table of Open Files of the Process
Twoja odpowiedź jest niepoprawna.
The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter
in an existing entry, Inserting a
new item into the Table of Open Files of the Process

What type of code can multiple processes execute simultaneously?
Select one or more:
a.
reentrant
b. dynamically relocated
c.
self-modifying
d. binary
Twoja odpowiedź jest poprawna.
The correct answer is: reentrant

Address translation aims to:
Select one or more:
a.
detecting the phenomenon of locality of references
b. converting a physical address to a virtual one
c.
Generating a "frame error" interrupt when the page is out of memory
d. converting a virtual address to a physical one
Twoja odpowiedź jest poprawna.
The correct answer is: converting a virtual address to a physical one

The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
Select one or more:
a.
SJF
b. time slicing
c.

priority
d. FCFS
Twoja odpowiedź jest poprawna.
The correct answer is: SJF

nter-process communication can be organized using:
Select one or more:
a.
messages
b. shared directly addressable memory fields
c.
shared memory fields accessible through system calls
d. interrupts
Twoja odpowiedź jest poprawna.
The correct answers are: messages, shared directly addressable memory fields, shared memory fields
accessible through system calls

Which of the following memory allocation schemes can cause external fragmentation?
a.
Multiple contiguous fixed partitions of equal size
b. Paging
c.
Sweeping
d. Multiple contiguous fixed partitions of various sizes
e.
Segmentation
The correct answers are: Segmentation, Sweeping

For concurrency in OS:
a.
timer interrupts are necessary
b. interrupt handling is necessary
c.
special processor support is required
d. cache memory is necessary
The correct answer is: interrupt handling is necessary

Which of the following information is stored on task switching?
a.
I/O status information
b. contents of general purpose registers, program counter, and similar registers available to the program
c.
Contents of the instruction register and similar registers
d. scheduler data
The correct answers are: I/O status information, scheduler data, contents of general purpose registers,
program counter, and similar
registers available to the program

The conversion of the effective address to the physical one takes place:
Select one or more:

a.

in the bus arbiter

b. in the memory management unit

c.

in the arithmetic-logic unit

d. in the sequencer

Twoja odpowiedź jest poprawna.

The correct answer is: in the memory management unit

The logical address is also:

Select one or more:

a.

Relative address

b. Effective address

c.

Absolute address

d. Physical address

Twoja odpowiedź jest niepoprawna.

The correct answer is: Effective address

Which of the following statements is true for system level threads?

a.

Kernel-level threads require their descriptors in the kernel.

b. Multithreaded applications cannot use multiprocessing.

c.

User-level threads can be synchronized by the kernel.

d. The threading implementation at the kernel level is done by the thread library attached to the program.

The correct answer is: Kernel-level threads require their descriptors in the kernel.

Address translation mechanism:

Select one or more:

a.

Concatenates the page number and page offset

b. Concatenates the frame number and offset on the page

c.

Adds the frame number to the page number

d. Concatenates the frame number and page number

Twoja odpowiedź jest poprawna.

The correct answer is: Concatenates the frame number and offset on the page

The effective address is also:

Select one or more:

a.

Logical address

b. Physical address

c.

Indirect address

d. Absolute address

Twoja odpowiedź jest poprawna.

The correct answer is: Logical address

Dynamic relocation is performed by:
a.
Loader
b. Linker
c.
Paging system
d. Special registers (DATUM)
The correct answers are: Special registers (DATUM), Paging system

What is included in the context that must be maintained for a synchronous precision interrupt?
Select one or more:
a.
instruction register
b. colletive or individual interrupt mask
c.
program counter
d. general purpose registers
Twoja odpowiedź jest poprawna.
The correct answers are: general purpose registers, program counter, colletive or individual interrupt mask

System/user threads:
Select one or more:
a.
User-level thread descriptors are stored in the address space of the program.
b. User-level threads share the same stack.
c.
User-level threads share the same execution context.
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 1.
The correct answers are: User-level thread descriptors are stored in the address space of the program., User-level threads share the same
execution context.

How is exception identification performed?
Select one or more:
a.
the specification of hardware interrupts and errors is given over the data bus
b. the specification of hardware interrupts is given over the data bus
c.
all exceptions are specified using the data bus
d. the specification of hardware interrupts and traps is given over the data bus
Twoja odpowiedź jest poprawna.
The correct answer is: the specification of hardware interrupts is given over the data bus

The combination of paging and segmentation consists in:
Select one or more:
a.
the use of a segment table or a pool of segment registers treated as an additional, superior level of paging
b. Generating a "frame error" interrupt when the frame containing the page does not belong to the current segment

c.
dividing pages into segments
d. identifying segments with pages

Dynamic relocation is performed by:
a.
Segment descriptors
b. Linker
c.
Loader
d. Compiler
The correct answer is: Segment descriptors

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:
Answer:
Thrashing

The correct answer is: anomaly

he hardware resources of a computer system are:
Select one or more:
a.
Primary memory
b. Windows on the screen
c.
Processor time
d. Peripheral devices
Twoja odpowiedź jest poprawna.
The correct answers are: Processor time, Primary memory, Peripheral devices

How does the operating system call the task completion subroutine?
3.recreates the context programmatically and executes the IRET instruction
2.sets the trace in the terminating subroutine to the current position
4.builds an interrupt vector on the system stack pointing to the terminating subroutine code
1.builds the frame of the terminating subroutine on the task stack
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 2.
The correct answer is: 3. → builds an interrupt vector on the system stack pointing to the terminating
subroutine code, 2. → sets the trace
in the terminating subroutine to the current position, 4. → recreates the context programmatically and
executes the IRET instruction, 1. →
builds the frame of the terminating subroutine on the task stack

What mechanism is part of time-sharing systems?
a.
short-term scheduler
b. swapping
c.
long-term scheduler
d. medium-term scheduler
The correct answer is: short-term scheduler

On UNIX, the number of files is directly limited by:
Select one or more:
a.
The number of bits of the disk address
b. The size of the space allocated for files
c.
I-node table size
d. The number of bits of the field describing the size of the file
e.
Allocation unit size
Twoja odpowiedź jest częściowo poprawna.
You have correctly selected 1.
The correct answers are: I-node table size, The size of the space allocated for files

What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task1234
processing
time3.45.531.1
Answer:
4.3

The correct answer is: 4.3

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo
the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered
strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.::
the beginning of strip 0,1,2,3 looks like this:
01001Parity disk
11111Disk 3
10110Disk 2
10101Disk 1
01100Disk 0
In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odd.
Disk 3 has been corrupted and always reads 1. After replacing the disk with a new one, what values should be put in the strip on disk 3?
Answer:
1001

The correct answer is: 11001

Assuming memory cells are 1-byte, the page number in the address field is 12 bits, the offset is 12 bits, the frame number is 10 bits, and all
entries in the TIS page index table are on a 16-bit word boundary, enter:
- TIS maximum size of the program in kB
Answer:
16384

The correct answer is: 8
##

##
##############   File: Final Test2.txt #########
##
Interrupt vector:

Question 1Select all correct:

and.
contains the instruction counter, condition bits, interrupt mask, and general purpose registers

b.
it is saved automatically when an interrupt is accepted

c.
contains minimal information that cannot be saved programmatically

d.
contains the ID of the process that should be restarted

Feedback
Your answer is correct.

The correct answers are: it is saved automatically when an interrupt is accepted, contains minimal
information that cannot be saved programmatically

In what states can a task occur?

Question 2Select all correct:

and.
ready

b.
current

c.
blocked

d.
resetted
Feedback
Your answer is correct.

The correct answers are: current, ready, blocked

Which of the following are affected by the thrashing phenomenon?

Question 3Answer

and.
program structure

b.
mass memory

c.
primary memory

d.
program size

Feedback
The correct answer is: primary memory

The kernel is _____ user-level threads.

Question 4Answer

and.
part

b.
creator.creator

c.
aware

d.
unaware

Feedback
The correct answer is: unaware

Indulgent scheduling is the best mechanism for:

Question 5Select all correct:

and.
real-time system

b.
system with many process classes

c.
time-sharing system

d.
everysystem

The interrupt acceptance sequence consists of (in the sequence):

Question 6Select all correct:

and.
identification of the interrupt level, saving the interrupt vector, performing a jump according to the interrupt table

b.
identification of the interrupt level, performing a jump according to the interrupt table, saving the interrupt vector

c.
identification of the interrupt level, saving the interrupt vector, performing a jump with a trace according to the interrupt table

d.
identification of the interrupt level, performing a jump with the trace according to the interrupt table, saving the interrupt vector

MMU uses index tables to:

Question 7Select all correct:

and.
generate an effective address

b.
generate a relative address

c.
generating a physical address

d.
generate a logical address

Feedback
Your answer is correct.

The correct answer is: generating a physical address

Which scheduler needs to make a decision the fastest?

Question 8Answer

and.
medium-term

b.
additional

c.
short-term

d.
long-term

Feedback
The correct answer is: short-term

The following paging exceptions allow for returning to the program after they occur:

Question 9Select all correct:

and.
interrupt on write (IOW)

b.
pagefault

c.
attempting to write to a write-protected frame

d.
attempt to read from the frame storing the code

Feedback
Your answer is correct.

The correct answers are: page fault, interrupt on write (IOW)

Which of the following memory allocation schemes causes external fragmentation?

Question 10Answer

and.
Multiple contiguous fixed partitions of various sizes

b.
Multiple contiguous fixed partitions of equal size

c.
Sweeping

d.
Paging

Feedback
The correct answers are: Sweeping, Multiple contiguous fixed partitions of various sizes

Discontinuous allocation:

Question 11Select all correct:

and.
increases internal fragmentation

b.
reduces external fragmentation

c.
reduces internal fragmentation

d.
increases external fragmentation

Feedback

Round-robin scheduling is the best mechanism for:

Question 12Select all correct:

and.
system with different classes of tasks

b.
time-sharing system

c.
everysystem

d.
real-time system

Feedback
Your answer is correct.

The correct answer is: time-sharing system

In a four-level page index table, the page number is:

Question 13Select all correct:

and.
in the first level table - the leftmost in the figure

b.
in the table of the last level - the rightmost in the figure

c.
part in the table of each level

d.
none of the above answers

Feedback
Your answer is incorrect.

The correct answer is: none of the above answers

Sequence of actions when starting a new task:
1.

Answer 1 Question 14
filling in the descriptor in the kernel

2.

Answer 2 Question 14
memory allocation if this is the first task of the program

3.

Answer 3 Question 14
initialize the stack, fill the first frame

4.

Answer 4 Question 14
instruction to transfer control to the task

Feedback
Your answer is correct.

The correct answer is: 1. → filling in the descriptor in the kernel, 2. → memory allocation if this is the first task of the program, 3. → initialize the stack, fill the first frame, 4. → instruction to transfer control to the task

Paging - two-level index tables mode of operation

Question 15Select all correct:

and.
The content of the level 1 table element is concatenated (combined) with the content of the level 2 table element

b.
The content of a level 1 table element is an index in a level 2 table

c.
The content of a level 1 table element points to a level 2 table

d.
The content of a level 1 table element points to a level 2 table

Feedback

The behavior of the exchange algorithm opposite to that expected with the measures taken is called:

Answer:Question 16
thrashing
Feedback
The correct answer is: anomalies

MMU uses index tables to:

Question 17Select all correct:

and.
generate a physical address

b.
generate a relative address

c.
generate an effective address

d.
generate a logical address

Feedback
Your answer is incorrect.

The correct answer is: generate a physical address

Using the Test-And-Set instruction in synchronization:

Question 18Select all correct:

and.
Stops the processor if 0 is read

b.
Requires organizing inactive waiting in queues

c.
Requires the use of semaphores

d.
It requires processes to actively wait

Feedback
Your answer is correct.

The correct answer is: It requires processes to actively wait

Physical address:

Question 19Select all correct:

and.
points to a location in the address space of primary memory

b.
points to a cell in the process address space

c.
indicates a relative address to the segment register

d.
is contained in the address field of the instruction

Feedback
Your answer is correct.

The correct answer is: points to a location in the address space of primary memory

What mechanism is part of batch systems?

Question 20Answer

and.
medium-tevel scheduler

b.
no scheduler is needed

c.
low-level scheduler

d.
high-level scheduler

A process always transitions from the "user" state to the "system" state as a result of:

Question 21Select all correct:

and.
Process suspension

b.
A software interrupt that calls a system function

c.
Hardware interrupt

d.
Debugger trap

What can happen when a job leaves the critical section and more than 1 task is waiting for the critical section?

Question 22Select all correct:

and.
active waiting for a critical section

b.
deadlock waiting for critical section

c.
starvation awaiting a critical section

d.

letting both tasks into the critical section

Feedback
Your answer is correct.

The correct answer is: starvation awaiting a critical section

In operating system:

Question 23Select all correct:

and.
the decision to handle an exception or not is made dynamically

b.
some exceptions are handled, some not

c.
timer interrupt may not be handled

d.
every exception must be handled

Feedback
Your answer is correct.

The correct answer is: every exception must be handled

When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception is raised in system mode?

Question 24Select all correct:

and.
initializes the kernel system stack from the scratch

b.
switches to the next kernel system stack

c.
nothing special, it builds the context on the kernel system stack

d.

switches back to the application program stack

Feedback
Your answer is correct.

The correct answer is: nothing special, it builds the context on the kernel system stack

The direct resume rule means that:

Question 25Select all correct:

and.
The resuming process loses the critical region

b.
The resuming process applies for the critical region just like other processes waiting to enter the critical region

c.
The summing process gets a critical region after the resumed process exits the critical region

Feedback
Your answer is correct.

The correct answers are: The resuming process loses the critical region, The resuming process applies for the critical region just like other processes waiting to enter the critical region

Is memory protection useless on a single-user system?

Question 26Answer
True
Falsehood
Feedback
The correct answer is "False".

The effective address is also:

Question 27Select all correct:

and.
Absolute address

b.
Physical address

c.
Logicaladdress

d.
Indirect address

Feedback
Your answer is correct.

The correct answer is: Logical address

The Test-And-Set or Compare-And-Swap instruction has the following characteristics:

Question 28Select all correct:

and.
Requires active waiting from tasks

b.
It is possible to use only on computers with common memory

c.
It is possible to deadlock with TAS/CAS operations on multiple variables

d.
It is possible to use only in 1-processor systems

Feedback
Your answer is correct.

The correct answers are: Requires active waiting from tasks, It is possible to use only on computers with common memory, It is possible to deadlock with TAS/CAS operations on multiple variables

A single-program system is one that, in principle :

Question 29Select all correct:

and.
Doesn't allow you to delete the program from memory (uses non-volatile memory)

b.
Requires static relocation

c.
Runs on a uniprocessor computer

d.
Allows for storing only one program in primary memory

Feedback
Your answer is correct.

The correct answer is: Allows for storing only one program in primary memory

What is this technique where the operating system gathers programs and data together before processing?

Question 30Answer

and.
Batch processing

b.
Real-time processing

c.
Interactive processing

d.
Distributed processing

Feedback
The correct answer is: Batch processing

The system stack must provide space for:

Question 31Select all correct:

and.
Processor registers in as many copies as there are interrupt lines +1

b.
Processor registers in as many copies as there are devices in the system +1

c.

Processor registers in as many copies as there are interrupt lines and possible software interrupts

d.
CPU registers

Feedback
Your answer is correct.

The correct answer is: Processor registers in as many copies as there are interrupt lines +1

System/user threads:

Question 32Select all correct:

and.
System level thread descriptors are stored in the operating system kernel.

b.
User-level threads share the same stack.

c.
User-level threads share the same execution context.

Feedback
Your answer is correct.

The correct answers are: System level thread descriptors are stored in the operating system kernel., User-level threads share the same execution context.

By definition , a deadlock is a situation where:

Question 33Select all correct:

and.
any greater than zero number of processes are waiting for conditions that cannot be met

b.
at least two processes are waiting for conditions that cannot be met

c.
any greater than one number of processes are waiting for conditions that cannot be met

d.
exactly one process is waiting for a condition that cannot be met

Allocation unit for file storage:

Question 34Answer

and.
it should be selected to match the characteristics of the data

b.
may differ between files in a partition

c.
may be a variable in a partition

d.
may vary between partitions

The common allocation queue to fixed blocks of memory of different sizes causes:

Question 35Select all correct:

and.
internal fragmentation

b.
external fragmentation

c.
need for compaction

Consider the following sequence of address references:

123, 215, 600, 1234, 76, 96.

If the page size is 100, the order of page references is as follows:

Question 36Answer

and.
0,2,6,12,0,0

b.
12,21,60,123,7,9

c.
1,2,6,12,0,0

d.
1,2,6,12

Feedback
The correct answer is: 1,2,6,12,0,0

In UNIX, access rights are attributes:

Question 37Select all correct:

and.
A directory entry for a file

b.
A special table specifying access rights

c.
User descriptor

d.
An entry in the I-node table

Feedback
Your answer is incorrect.

The correct answer is: An entry in the I-node table

In the four-level page index table, the frame number is:

Question 38Select all correct:

and.
part in the table of each level

b.
in the table of the last level - the rightmost in the figure

c.
in the first level table - the leftmost in the figure

d.
none of the above answers

Which of the following few common services can be partially provided by software other than the operating system?

Question 39Answer

and.
Running programs

b.
I/O operations

c.
Security and protection

d.
Manipulating the file system

Feedback
The correct answers are: Security and protection, Manipulating the file system

Memory partitioning into blocks of any size:

Question 40Select all correct:

and.
It implies external fragmentation

b.
It implies internal fragmentation

c.
It does not imply fragmentation

The number of tasks performed on the system in a given time is:

Question 41Select all correct:

and.
efficiency

b.
throughput

c.
utilization

d.
response time

The sequence of actions in interrupt handling:

1.

2.

3.

4.

The sequence of actions in interrupt handling:

1.[saving a copy of the interrupt vector (PC and SR)]

2.[switching to system mode (modification of PC and status register)]

3.[programmatic context saving]

4. [switching to the system stack]

Scheduling disk access involves deciding on the following:

Question 43Answer

and.
the order in which disk access requests should be handled

b.
about the type of disks the system should have

c.
which drive should be used next

d.
about the physical location of the files

Feedback
The correct answer is: the order in which disk access requests should be handled

Which of the following information is stored on task switching?

Question 44Answer

and.
scheduler data

b.
I/O status information

c.
Contents of general purpose registers, program counter, and similar registers available to the program

d.
Contents of datum, limit and other registers inaccessible to the program

The hardware resources of a computer system are:

Question 45Select all correct:

and.
Virtual memory

b.
Windows on the screen

c.
Processor time

d.
Peripheral devioces

Address translation is handled by a unit called (give the abbreviation):

Answer:Question 46
MMU

At the suspended state is a process that:

Question 47Select all correct:

and.
waits for an I/O operation to complete

b.
waits for a processor

c.
fills the processor idle time

d.
occupations and processor

Feedback
Your answer is correct.

The correct answer is: waits for an I/O operation to complete

Address translation mechanism:

Question 48Select all correct:

and.
adds the frame number to the page number

b.
concatenates the frame number and page number

c.
concatenates the frame number and offset on the page

d.
concatenates the page number and page offset

Feedback
Your answer is correct.

The correct answer is: concatenates the frame number and offset on the page

Address translation aims to:

Question 49Select all correct:

and.
detecting the phenomenon of locality of references

b.
converting a physical address to a virtual one

c.
Generating a "frame error" interrupt when the page is out of memory

d.
converting a virtual address to a physical one

Feedback
Your answer is incorrect.

The correct answer is: converting a virtual address to a physical one

In the "current" state, there is a process that:

Question 50Select all correct:

and.
waits for a processor

b.
fills the CPU idle time

c.
waits for an I/O operation to complete

d.
occupations and processor

Feedback
Your answer is correct.

The correct answer is: occupies a processor

In a FAT-based disk system, file size is directly limited by:

Question 51Select all correct:

and.
FAT table size

b.
Allocation unit size

c.
The number of bits of the field describing the size of the file

d.
The number of bits of the disk address

e.
The size of the disk space

Feedback
Your answer is partially correct.

You correctly selected: 1.
The correct answers are: The size of the disk space , The number of bits of the field describing the size of the file

On UNIX, the number of files is directly limited by:

Question 52Select all correct:

and.
FAT size

b.
The number of bits of the disk address

c.
Allocation unit size

d.
The number of bits of the field describing the size of the file

e.
The size of the space allocated for files

Feedback
Your answer is incorrect.

The correct answer is: The size of the space allocated for files

The program supervisor layer in the operating system has the following role:

Question 53Select all correct:

and.

Intercepts all program system calls and routes them to the appropriate layers

b.
Deals with the management of primary memory (memory allocation to programs)

c.
Runs programs

d.
Deals with buffering data written and read from mass memory

Feedback
Your answer is partially correct.

You chose correctly: 2.
The correct answers are: Intercepts all program system calls and routes them to the appropriate layers ,
Runs programs, Deals with the management of primary memory (memory allocation to programs)

The multi-level interrupt controller includes :

Question 54Select all correct:

and.
Individual interrupt mask

b.
Priority encoder

c.
The register of interrupt being serviced

d.
Collective interrupt mask

Feedback
Your answer is correct.

The correct answers are: Collective interrupt mask , Individual interrupt mask , Priority encoder

A concurrent system is one that, in principle :

Question 55Select all correct:

and.
It allows multiple programs/processes/threads to run physically simultaneously

b.
Requires the use of timer interrupts

c.
Allows multiple programs/processes/threads to run simultaneously or seemingly simultaneously

d.
It runs on a multiprocessor computer

Feedback
Your answer is incorrect.

The correct answer is: Allows multiple programs/processes/threads to run simultaneously or seemingly simultaneously

Address translation aims to:

Question 56Select all correct:

and.
Converting a virtual address to a physical one

b.
Detecting the phenomenon of locality of references

c.
Converting a physical address to a virtual one

d.
Generating a "frame error" interrupt when the page is out of memory

Feedback
Your answer is incorrect.

The correct answer is: Converting a virtual address to a physical one

Which swapping algorithms use the history of page references (when was it last used or in which time slices was it used)?

Question 57Select all correct:

and.

working set

b.
LRU

c.
clock

d.
LFU

e.
second chance

f.
no algorithm

g.
NRU

h.
FIFO

Feedback
Your answer is incorrect.

The correct answers are: second chance, LRU, LFU, working set

If the loader inserts a program with absolute addresses into a fixed address space, it is called:

Question 58Answer

and.
Dynamic loading

b.
Static relocation

c.
Static loading

d.

Dynamic relocation

Static relocation is performed by:

Question 59Answer

and.
Loader

b.
Linker

c.
Paging system

d.
Special registers (DATUM)

What is a scheduler?

Question 60Select all correct:

and.
the system process that allocates the processor

b.
memory allocation procedure

c.
procedure that schedules frame release in the page replace algorithm

d.
a kernel routine that selects a task to execute

What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 3 processors

task

1

2

3

4

processing time

3.2

6.2

2.7

1.6

Answer:Question 61
3.82
Feedback
The correct answer is: 3.8

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zero bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.::

the beginning of strip 0,1,2,3 looks like this:

0

1

0

0

1
Parity disk

1

1

1

1

1

Disk 3

1

0

1

1

0

Disk 2

1

0

1

0

1

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values   are placed so that the parity bit keeps the corresponding strip bits 0-3 odds.

Disk 3 has been corrupted and always reads 1. After replacing the disk with a new one, what values
  should be put in the strip on disk 3?

Answer:Question 62

1, 1, 0, 1
Feedback
The correct answer is: 11001

Assuming memory cells are 1-byte, the page number in the address field is 12 bits, the offset is 12 bits, the frame number is 10 bits, and all entries in the TIS page index table are on a 16-bit word boundary, enter:

- the maximum size of the program's virtual memory in MB

Answer:Question 63
16
Feedback
The correct answer is: 2
##

##
##############   File: Test2 Den.txt #########
##
Question 1

A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Question 1Select one or more:

a.
swapping

b.
mapping

c.
sweeping

d.
paging

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: paging

Question 2

A multiprogram system is one that, in principle:

Question 2Select one or more:

a.
Requires dynamic relocation

b.
Requires relocation or equivalent mechanism

c.
It allows for storing many programs in primary memory

d.
It allows for running programs only one after another

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: It allows for storing many programs in primary memory, Requires relocation or equivalent mechanism
Question 3

Static relocation is performed by:

Question 3Answer

a.
Segment descriptors

b.
Paging system

c.
Special registers (DATUM)

d.
Loader

Feedback
The correct answer is: Loader
Question 4
Partially correct
Mark 0.50 out of 1.00
Flag question

The common allocation queue to fixed blocks of memory of different sizes causes:

Question 4Select one or more:

a.
external fragmentation

b.
need for compaction

c.
internal fragmentation

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: internal fragmentation, external fragmentation
Question 5
Incorrect
Mark 0.00 out of 1.00
Flag question

On what system is it not worth using memory protection?

Question 5Answer

a.
Without OS

b.
One-user

c.
Not concurrent

d.
One-program

Feedback
The correct answer is: Without OS
Question 6
Incorrect
Mark 0.00 out of 1.00
Flag question

Frame protection bits:

Question 6Select one or more:

a.
must be available for writing

b.
must be readable

c.
must be group readable

d.
must be available for group clear

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: must be available for writing
Question 7

The resources of the computer system are:

Question 7Select one or more:

a.
Peripheral devices

b.
Files

c.
Primary memory

d.
User programs

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Files
Question 8

Which of the following applies to user-level threads?

Question 8Answer

a.
User-level threads can themselves be multi-threaded.

b.
User-level threads cost no execution time in system mode.

c.

The organization of user-level threads is specific to the operating system.

d.

User-level threads require their descriptors in the kernel.

Feedback

The correct answer is: User-level threads cost no execution time in system mode.

Question 9

The return from interrupt instruction:

Question 9Select one or more:

a.

restores the conditions register

b.

causes the processor to switch to a process other than the interrupted one

c.

restores the program counter

d.

restores the process stack

Feedback

Twoja odpowiedź jest poprawna.

The correct answers are: restores the program counter, restores the conditions register

Question 10

Partially correct

Mark 0.67 out of 1.00

Flag question

The hardware resources of a computer system are:

Question 10Select one or more:

a.

Peripheral devices

b.

Windows on the screen

c.

Primary memory

d.
Processor time

You have correctly selected 2.

The correct answers are: Processor time, Primary memory, Peripheral devices
Question 11
Incorrect
Mark 0.00 out of 1.00
Flag question

After accepting an interrupt, the next interrupts are:

Question 11Select one or more:

a.
some blocked, some unblocked, developer decides

b.
partly blocked, partly unblocked, according to the level of the accepted interrupt

c.
unblocked

d.
blocked

The correct answer is: blocked
Question 12
Incorrect
Mark 0.00 out of 1.00
Flag question

The root directory of the disk should be located:

Question 12Answer

a.
in a place hard-coded in the structures of the operating system

b.
in a place designated by the data structure in a fixed location on the disk

c.

at a fixed address in main memory

d.

in a permanent place on the disk

Feedback

The correct answer is: in a place designated by the data structure in a fixed location on the disk

Question 13

Incorrect

Mark 0.00 out of 1.00

Flag question

"Soft" real-time system:

Question 13Select one or more:

a.

Guarantees interrupt handling time

b.

Guarantees average response time

c.

Guaranteed response time

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answer is: Guarantees average response time

Question 14

The sequence of actions in interrupt handling:

1.

2.

3.

4.

Feedback

Twoja odpowiedź jest poprawna.

The correct answer is:

The sequence of actions in interrupt handling:

1.[saving a copy of the interrupt vector (PC and SR)]

2.[switching to system mode (modification of PC and status register)]

3.[programmatic context saving]

4.[switching to the system stack]

Question 15

The page reference and modification bits are used to:

Question 15Select one or more:

a.
address translation support

b.
checking whether the frame is empty or contains a page

c.
counting references for swapping optimization

d.
locality of references detection

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: counting references for swapping optimization
Question 16

The system stack must provide space for:

Question 16Select one or more:

a.
CPU registers

b.
Processor registers in as many copies as there are interrupt lines and possible software interrupts

c.
Processor registers in as many copies as there are devices in the system +1

d.
Processor registers in as many copies as there are interrupt lines +1

The correct answer is: Processor registers in as many copies as there are interrupt lines +1
Question 17

How does the operating system call the task completion subroutine?

1.

Answer 1 Question 17
builds the frame of the terminating subroutine on the task stack

4.

Answer 2 Question 17
recreates the context programmatically and executes the IRET instruction

3.

Answer 3 Question 17
builds an interrupt vector on the system stack pointing to the terminating subroutine code

2.

Answer 4 Question 17
sets the trace in the terminating subroutine to the current position

The correct answer is: 1. → builds the frame of the terminating subroutine on the task stack, 4. → recreates the context programmatically and executes the IRET instruction, 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code, 2. → sets the trace in the terminating subroutine to the current position
Question 18
Incorrect
Mark 0.00 out of 1.00
Flag question

Virtual memory consists of:

Question 18Select one or more:

a.
primary memory and cloud storage

b.
primary and mass memory

c.
primary memory and cache

d.
cache memory and mass storage

The correct answer is: primary and mass memory
Question 19
Incorrect
Mark 0.00 out of 1.00
Flag question

Effective address is:

Question 19Select one or more:

a.
indirect address

b.
relative address

c.
logical address

d.
physical address

The correct answer is: logical address
Question 20
Incorrect
Mark 0.00 out of 1.00
Flag question

The multi-level interrupt controller includes:

Question 20Select one or more:

a.
Collective interrupt mask

b.
The register of interrupt being serviced

c.

Priority encoder

d.
Individual interrupt mask

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: Collective interrupt mask, Individual interrupt mask, Priority encoder
Question 21

Which scheduler needs to make a decision the fastest?

Question 21Answer

a.
medium-term

b.
additional

c.
long-term

d.
short-term

Feedback
The correct answer is: short-term
Question 22
Incorrect
Mark 0.00 out of 1.00
Flag question

The page reference and modification bits are used to:

Question 22Select one or more:

a.
Detection of locality of references

b.
Indication whether the frame is empty or contains a page

c.
Counting references to optimize exchanges

d.
Address translation support

Question 23

What mechanism is part of time-sharing systems?

Question 23Answer

a.
short-term scheduler

b.
long-term scheduler

c.
swapping

d.
medium-term scheduler

Question 24

Multiprogramming is a technique in which, as a rule:

Question 24Select one or more:

a.
is a memory allocation method by which a program is divided into equal parts

b.
only addresses that can be generated by the processor when performing calculations are used

c.
many programs can be stored in primary memory

d.
is a method of allocating processor time

The correct answer is: many programs can be stored in primary memory
Question 25

In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:

Question 25Answer

a.
task management

b.
task sheduling

c.
task timetable management

d.
traffic control

Feedback
The correct answer is: task sheduling
Question 26
Partially correct
Mark 0.33 out of 1.00
Flag question

Onion algorithm:

Question 26Select one or more:

a.
Causes external fragmentation

b.
Causes internal fragmentation

c.
Reduces external fragmentation by aligning the allocation order with the process hierarchy

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: Causes internal fragmentation, Causes external fragmentation, Reduces external fragmentation by aligning the allocation order with the process hierarchy

Question 27
Incorrect
Mark 0.00 out of 1.00
Flag question

If the loader inserts a program with absolute addresses into a fixed address space, it is called:

Question 27Answer

a.
Static relocation

b.
Static loading

c.
Dynamic loading

d.
Dynamic relocation

Feedback
The correct answer is: Dynamic relocation
Question 28

In which swapping algorithms is the M bit value used?

Question 28Select one or more:

a.
no algorithm

b.
clock

c.
LFU

d.
second chance

e.
working set

f.
LRU

g.
FIFO

h.
NRU

i.
optimal

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: NRU
Question 29

When is the scheduler called?

Question 29Select one or more:

a.
when the scheduler decides itself

b.
at the end of the execution of each kernel procedure

c.
at the start of execution of each kernel procedure

d.
at the request of a user task

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: at the end of the execution of each kernel procedure
Question 30
Incorrect
Mark 0.00 out of 1.00
Flag question

Memory partitioning into blocks of any size:

Question 30Select one or more:

a.
It implies internal fragmentation

b.
It does not imply fragmentation

c.
It implies external fragmentation

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: It does not imply fragmentation
Question 31
Incorrect
Mark 0.00 out of 1.00
Flag question

Dynamic relocation:

Question 31Select one or more:

a.
Requires hardware support in the form of a DATUM register

b.
Requires hardware support in the form of a LIMIT register

c.
Requires relative references to be addressed when the program is loaded into memory

d.
Allows for temporal elimination of external fragmentation

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: Requires hardware support in the form of a DATUM register, Allows for temporal elimination of external fragmentation
Question 32

Physical address:

Question 32Select one or more:

a.
points to a location in the address space of primary memory

b.

points to a cell in the process address space

c.
indicates a relative address to the segment register

d.
is contained in the address field of the instruction

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: points to a location in the address space of primary memory
Question 33

The page index table address is stored in:

Question 33Select one or more:

a.
page register

b.
page table base register

c.
instruction pointer

d.
segment base register

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: page table base register
Question 34

The combination of paging and segmentation consists in:

Question 34Select one or more:

a.
the use of a segment table or a pool of segment registers treated as an additional, superior level of paging

b.
dividing pages into segments

c.

identifying segments with pages

d.

Generating a "frame error" interrupt when the frame containing the page does not belong to the current segment

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: the use of a segment table or a pool of segment registers treated as an additional, superior level of paging
Question 35
Partially correct
Mark 0.50 out of 1.00
Flag question

Two successive executions of operation V in one process on a binary semaphore in down state:

Question 35Select one or more:

a.
Increases semaphore value by 2

b.
Raises the semaphore if there are no suspended processes

c.
It doesn't change anything

d.
If the semaphore guards a critical region, it can lets two processes enter the critical region

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.

The correct answers are: If the semaphore guards a critical region, it can lets two processes enter the critical region, Raises the semaphore if there are no suspended processes
Question 36
Partially correct
Mark 0.50 out of 1.00
Flag question

Which of the following memory allocation schemes causes external fragmentation?

Question 36Answer

a.
Sweeping

b.
Multiple contiguous fixed partitions of equal size

c.
Multiple contiguous fixed partitions of various sizes

d.
Paging

Feedback
The correct answers are: Sweeping, Multiple contiguous fixed partitions of various sizes
Question 37

A memory management technique in which the system divides memory into equal-sized portions to easily manage relocation is called:

Question 37Select one or more:

a.
swapping

b.
mapping

c.
paging

d.
fragmentation

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: paging
Question 38

In UNIX, the disk contains the following areas:

Question 38Select one or more:

a.
Directories

b.
I-node table

c.
Files data

d.
SuperBlock

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: SuperBlock, I-node table, Files data
Question 39

The process context includes:

Question 39Select one or more:

a.
General purpose registers

b.
Process descriptor

c.
External devices registers

d.
The content of the file containing the program

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: General purpose registers, Process descriptor
Question 40

In the case of hardware interrupt summation ("wire or"):

Question 40Select one or more:

a.
the bus driver can poll devices about issuing an interrupt

b.

the interrupt source is identified by a special bus signal

c.
the processor can programatically poll devices about issuing an interrupt

d.
the interrupt circuit can query devices about issuing an interrupt

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: the processor can programatically poll devices about issuing an interrupt, the bus driver can poll devices about issuing an interrupt
Question 41
Incorrect
Mark 0.00 out of 1.00
Flag question

Discontinuous allocation is the result of:

Question 41Select one or more:

a.
compaction

b.
relocation

c.
paging

d.
segmantation

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: paging, segmantation
Question 42

Static relocation is performed by:

Question 42Answer

a.
Linker

b.

Paging system

c.
Special registers (DATUM)

d.
Segment descriptors

Feedback
The correct answer is: Linker
Question 43

The number of condition variables is by definition in the monitor:

Question 43Select one or more:

a.
one

b.
as many as there are different conditions for the continuation of processes plus one for mutual exclusion

c.
as many as there are different conditions for the continuation of processes

d.
two

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: as many as there are different conditions for the continuation of processes
Question 44
Incorrect
Mark 0.00 out of 1.00
Flag question

In a four-level page index table, the page number is:

Question 44Select one or more:

a.
in the first level table - the leftmost in the figure

b.
in the table of the last level - the rightmost in the figure

c.
part in the table of each level

d.
none of the above answers

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: none of the above answers
Question 45
Partially correct
Mark 0.50 out of 1.00
Flag question

What does the file system layer do?

Question 45Answer

a.
Manages remote file systems

b.
Manages files

c.
Manages remote files

d.
Tracks the status of information

Feedback
The correct answers are: Tracks the status of information, Manages files
Question 46
Incorrect
Mark 0.00 out of 1.00
Flag question

On UNIX, the number of files is directly limited by:

Question 46Select one or more:

a.
The size of the space allocated for files

b.
The number of bits of the field describing the size of the file

c.

Allocation unit size

d.

I-node table size

e.

The number of bits of the disk address

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: I-node table size, The size of the space allocated for files

Question 47

Incorrect

Mark 0.00 out of 1.00

Flag question

Opening a file in UNIX writes the following entries in the operating system's data structures:

Question 47Select one or more:

a.

Inserting a new item into the Table of Open Files of the Process

b.

Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry

c.

Inserting a new entry into the System Table of Open Files or incrementing a counter in an existing entry

Feedback

Twoja odpowiedź jest niepoprawna.

The correct answers are: Inserting a new entry into the Table of Active I-nodes or increasing the counter in an existing entry, Inserting a new item into the Table of Open Files of the Process

Question 48

Which of the following facilities or abilities are required to provide mutual exclusion support?

Question 48Select one or more:

a.

The relative speeds of the tasks must be taken into account.

b.
A task that is performed outside the critical section must not affect the behavior of a task in the critical section.

c.
The task stays in its critical section only for a finite amount of time.

d.
Task scheduling must be considered.

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: A task that is performed outside the critical section must not affect the behavior of a task in the critical section., The task stays in its critical section only for a finite amount of time.
Question 49
Incorrect
Mark 0.00 out of 1.00
Flag question

Page thrashing is a phenomenon involving:

Question 49Select one or more:

a.
frequent downloading of pages that have just been swapped out from memory

b.
loading the same page over and over again

c.
frequent context changes that require page index tables to be reloaded

d.
frequently changing the values of bits describing pages in frames

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: frequent downloading of pages that have just been swapped out from memory
Question 50

Threads in operating system:
Question 50Select one or more:

a.
They share context except registers and stack

b.
They share context except stack

c.
They share the entire context

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: They share context except registers and stack
Question 51

What paging element is NOT used in real-time systems?

Question 51Select one or more:

a.
page swapping

b.
protection bits

c.
address translation

d.
reference bits

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: page swapping
Question 52

What does the kernel do when there is no task (process) to run?

Question 52Select one or more:

a.
switches off the power supply

b.
executes an infinite loop in the kernel until a task arrives

c.
resets the entire system

d.
starts the idle task

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: starts the idle task
Question 53

The resources of the computer system are:

Question 53Select one or more:

a.
User programs

b.
Peripheral devices

c.
Primary memory

d.
Processor time

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Primary memory, Peripheral devices, Processor time
Question 54
Partially correct
Mark 0.50 out of 1.00
Flag question

The direct resume rule means that:

Question 54Select one or more:

a.
The resuming process gets a critical region after the resumed process exits the monitor

b.
The resuming process applies for the critical region just like other processes on monitor input

c.

The resuming process loses the critical region
Proces wznawiający traci region krytyczny

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: The resuming process loses the critical regionProces wznawiający traci region krytyczny, The resuming process applies for the critical region just like other processes on monitor input
Question 55
Incorrect
Mark 0.00 out of 1.00
Flag question

By definition, a deadlock is a situation where:

Question 55Select one or more:

a.
any greater than one number of processes are waiting for conditions that cannot be met

b.
at least two processes are waiting for conditions that cannot be met

c.
any greater than zero number of processes are waiting for conditions that cannot be met

d.
exactly two processes are waiting for conditions that cannot be met

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: any greater than zero number of processes are waiting for conditions that cannot be met
Question 56

What is true about system level threads?

Question 56Answer

a.
Thread switching does not require interaction with the operating system.

b.
All process threads share the same address space.

c.
.All threads of the process must execute on the same processor.

d.
All process threads can share the same set of open files.

Feedback
The correct answers are: All process threads can share the same set of open files., All process threads share the same address space.
Question 57

The environment in which the process is executed includes:

Question 57Select one or more:

a.
Process address space

b.
A set of environment variables

c.
General purpose registers content

d.
Contents of the interrupt request register

e.
The content in the memory management unit

f.
Open files

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: A set of environment variables, Process address space, General purpose registers content, Open files
Question 58

In a concurrent environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:

Question 58Answer

a.
task scheduling

b.
task management

c.
traffic management

d.
task timetable planning

Feedback
The correct answer is: task scheduling
Question 59

What mechanism is part of batch systems?

Question 59Answer

a.
short-term scheduler

b.
medium-term scheduler

c.
no scheduler is needed

d.
long-term scheduler

Feedback
The correct answers are: long-term scheduler, medium-term scheduler
Question 60

What is a scheduler?

Question 60Select one or more:

a.
memory allocation procedure

b.
a kernel routine that selects a task to execute

c.

procedure that schedules frame release in the page replace algorithm

d.
the system process that allocates the processor

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: a kernel routine that selects a task to execute
Question 61
Correct
Mark 5.00 out of 5.00
Flag question

What is the average time in the system for tasks in the batch, using SJF algorithm?

The system is equipped with 4 processors

task

1

2

3

4

processing time

3.6

5.6

2.8

1.7

Answer:Question 61
3.425
Feedback
The correct answer is: 3.4
Question 62
Incorrect
Mark 0.00 out of 5.00
Flag question

In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:

1

1

1

0

0

Parity disk

1

1

1

1

1

Disk 3

1

0

0

1

0

Disk 2

1

1

0

0

1

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 even.

Disk 3 has been corrupted and always reads 1. After replacing the disk with a new one, what values should I put in the strip on disk 3?

Answer:Question 62
1
Feedback
The correct answer is: 11011
Question 63
Correct
Mark 5.00 out of 5.00
Flag question

The virtual address consists of 8b page number and 8b offset. The page index table is shown below (index, content). For decimal address 1928, binary 0000 0111 1000 1000, enter the physical address in the form: frame number.offset (as decimal numbers, offset in 3 digits). For example, for a physical address consisting of frame 0 and offset 18, specify 0.018. If there is no physical address for the given virtual address, then -1 should be specified.

7

12

6

0

5

-1

4

4

3

9

2

5

1

-1

0

2

Answer:Question 63
12.136
Feedback
The correct answer is: 12.136
##

##
############## File: exam1_review.txt #########
##
Consider the following sequence of address references:

123, 215, 600, 1234, 76, 96.

If the page size is 100, the order of page references is as follows:
Question 1Answer
a.1,2,6,12
b.1,2,6,12,0,0
c.12,21,60,123,7,9
d.0,2,6,12,0,0
Feedback
The correct answer is: 1,2,6,12,0,0
===
=======
Interrupt vector:
a.contains the ID of the process that should be restarted
b.it is saved automatically when an interrupt is accepted
c.contains the instruction counter, condition bits, interrupt mask, and general purpose registers
d.contains minimal information that cannot be saved programmatically
Feedback
The correct answers are: it is saved automatically when an interrupt is accepted, contains minimal
information that cannot be saved programmatically
===
=======
Individual interrupt mask:
a.register in which addresses of devices reporting individual interrupts are stored
b.a register whose bits are ANDed (conjunction) with the bits from the interrupt request register
c.a register whose bits are ORed (alternative) with the bits from the interrupt request register
d.a combinational circuit that calculates the number of the interrupt received
The correct answer is: a register whose bits are ANDed (conjunction) with the bits from the interrupt
request register
===
=======
Frame access bits (reference and modification):

Question 4Select one or more:

a.
must be readable

b.
must be available for writing

c.
must be group readable

d.
must be available for group clear

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: must be readable, must be available for group clear, must be group readable
===
=======
Having two-level page index tables:

Question 5Select one or more:

a.
the content of a level I table element is an index in a level II table

b.
the content of the level I table element is concatenated (combined) with the content of the level II table element

c.
the content of a level I table element points to a level II table

d.
the content of a level I table element is added to the content of a level II table element

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: the content of a level I table element points to a level II table
===
=======
In the philosophers problem, if there are 4 of them:

Question 6Select one or more:

a.
Starvation is possible

b.
Deadlock is not possible

c.

Starvation is not possible

d.

Deadlock is possible

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Deadlock is possible, Starvation is not possible
==
=======
The program supervisor layer in the operating system has the following role:

Question 7Select one or more:

a.

Intercepts all program system calls and routes them to the appropriate layers

b.

Runs programs

c.

Deals with the management of primary memory (memory allocation to programs)

d.

Deals with buffering data written and read from mass memory

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.
The correct answers are: Intercepts all program system calls and routes them to the appropriate layers,
Runs programs, Deals with the management of primary memory (memory allocation to programs)
==
=======
The return from interrupt instruction:

Question 8Select one or more:

a.

restores the conditions register

b.

causes the processor to switch to a process other than the interrupted one

c.
restores the program counter

d.
restores the process stack

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: restores the program counter, restores the conditions register
==
=======
Address translation mechanism:

Question 9Select one or more:

a.
Adds the frame number to the page number

b.
Concatenates the frame number and page number

c.
Concatenates the page number and page offset

d.
Concatenates the frame number and offset on the page

The correct answer is: Concatenates the frame number and offset on the page
==
=======
Using the Test-And-Set instruction in synchronization:

Question 10Select one or more:

a.
Requires an explicit relinquishment of the processor to another process

b.
Requires organizing inactive waiting in queues

c.
Stops the processor if 0 is read

d.

It requires processes to actively wait

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: It requires processes to actively wait
==
=======
In what states can a task occur?

Question 11Select one or more:

a.
current

b.
ready

c.
blocked

d.
resetted
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: current, ready, blocked
==
=======
What does the file system layer do?

Question 12Answer

a.
Manages remote files

b.
Tracks the location of the data

c.
Manages remote file systems

d.
Keeps track of how information is recorded

Feedback
The correct answers are: Keeps track of how information is recorded, Tracks the location of the data
==
=======
Indulgent scheduling is the best mechanism for:

Question 13Select one or more:

a.
system with many process classes

b.
real-time system

c.
time-sharing system

d.
every system

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: real-time system
==
=======
Inter-process communication can be organized using:

Question 14Select one or more:

a.
interrupts

b.
shared directly addressable memory fields

c.
shared memory fields accessible through system calls

d.
messages

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: messages, shared directly addressable memory fields, shared memory fields accessible through system calls
==
=======
There are three processes in the system:

C - calculation process (batch process performing complex calculations lasting several hours),
T - text editor (user edits text document)
K - compiler (the user compiles the program, e.g. in C++).

Assign processes to priorities in the operating system from the highest to the lowest priority.

highest Blank 1 Question 15
T

intermediate Blank 2 Question 15
K

lowest Blank 3 Question 15
C

Feedback
Twoja odpowiedź jest poprawna.
The correct answer is:
There are three processes in the system:

C - calculation process (batch process performing complex calculations lasting several hours),
T - text editor (user edits text document)
K - compiler (the user compiles the program, e.g. in C++).
Assign processes to priorities in the operating system from the highest to the lowest priority.

highest [T]

intermediate [K]

lowest [C]

===
=======
What mechanism is part of batch systems?

Question 16Answer

a.
no scheduler is needed

b.
low-level scheduler

c.
medium-tevel scheduler

d.
high-level scheduler

Feedback
The correct answers are: high-level scheduler, medium-tevel scheduler
Q==
=========

Which of the following memory allocation schemes causes external fragmentation?

Question 17Answer

a.
Multiple contiguous fixed partitions of various sizes

b.
Multiple contiguous fixed partitions of equal size

c.
Paging

d.
Segmentation

Feedback
The correct answers are: Segmentation, Multiple contiguous fixed partitions of various sizes
Q===
=========
Allocation unit for file storage:

Question 18Answer

a.
may differ between files in a partition

b.
may be a variable in a partition

c.
may vary between partitions

d.
it should be selected to match the characteristics of the data

Feedback
The correct answer is: may vary between partitions
Q===
=========
For concurrency in OS:

Question 19Answer

a.
special processor support is required

b.

cache memory is necessary

c.
interrupt handling is necessary

d.
timer interrupts are necessary

Feedback
The correct answer is: interrupt handling is necessary
Q==
=========
In a multitasking environment, the operating system decides which task the CPU gets, when, and for how long. This feature is called:

Question 20Answer

a.
task sheduling

b.
traffic control

c.
task timetable management

d.
task management

Feedback
The correct answer is: task sheduling
Q==
=========
The result of cooperation of concurrent processes:

Question 21Select one or more:

a.
it is always deterministic

b.
it may depend on how processes are scheduled

c.
it can be non-deterministic
Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: it may depend on how processes are scheduled, it can be non-deterministic
Q===
=========
At the blocked state is a process that:

Question 22Select one or more:

a.
waits for an I/O operation to complete

b.
occupies a processor

c.
fills the processor idle time

d.
waits for a processor

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: waits for an I/O operation to complete
Q===
=========
A multiprogram system is one that, in principle:

Question 23Select one or more:

a.
It allows for storing many programs in primary memory

b.
It allows for running programs only one after another

c.
Requires relocation or equivalent mechanism

d.
Requires dynamic relocation

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: It allows for storing many programs in primary memory, Requires relocation or equivalent mechanism
===
======
In UNIX, access rights are specified:

Question 24Select one or more:

a.
At the same time, for all files in a given directory owned by the user

b.
Individually for each file

c.
Separately for the user, the group to which the user belongs and for all others

d.
Separately for write, read and execute/search

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Individually for each file, Separately for the user, the group to which the user belongs and for all others, Separately for write, read and execute/search
==
=======
In the "current" state, there is a process that:

Question 25Select one or more:

a.
waits for an I/O operation to complete

b.
fills the CPU idle time

c.
occupies a processor

d.
waits for a processor

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: occupies a processor
==
=======
The address translation function is:

Question 26Select one or more:

a.
monotonic

b.
multivalent

c.
partial

d.
reverse

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: multivalent, partial
==
=======
The interrupt encoder is:

Question 27Select one or more:

a.
a combinational circuit that transmits to the processor the number of the interrupt to be serviced

b.
a combinational circuit that computes the number of the reported and unmasked interrupt with the highest
priority

c.
a register that tells the processor the interrupt number to be handled

d.
a combinational circuit that calculates the value of a new individual interrupt mask

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: a combinational circuit that computes the number of the reported and unmasked
interrupt with the highest priority, a combinational circuit that calculates the value of a new individual
interrupt mask, a combinational circuit that transmits to the processor the number of the interrupt to be
serviced
==
=======
The segment descriptor table contains:

Question 28Select one or more:

a.
addresses of all segment page index tables

b.
address of the segment page index table of the bottom-level (last level) in the hierarchy

c.
address of the segment page index table of the top-level (first level) in the hierarchy

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: address of the segment page index table of the top-level (first level) in the hierarchy
==
=======
Which of the following statements is true for system level threads?

Question 29Answer

a.
User-level threads can be synchronized by the kernel.

b.
Kernel-level threads require their descriptors in the kernel.

c.
Multithreaded applications cannot use multiprocessing.

d.
The threading implementation at the kernel level is done by the thread library attached to the program.

Feedback
The correct answer is: Kernel-level threads require their descriptors in the kernel.
==
=======
In a FAT-based disk system (without sharing allocation units by files), the number of files is directly limited by:

Question 30Select one or more:

a.
The number of bits of the disk address

b.
Allocation unit size

c.

The number of bits of the field describing the size of the file

d.
FAT table size

e.
The size of the disk space

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: FAT table size, The size of the disk space
==
=======
Dynamic relocation is performed by:

Question 31Answer

a.
Segment descriptors

b.
Compiler

c.
Linker

d.
Loader

Feedback
The correct answer is: Segment descriptors
Q===
=========
Compaction uses the mechanism:

Question 32Select one or more:

a.
deleting segments from memory

b.
dynamic relocation

c.
paging

d.
static relocation

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: dynamic relocation
==
=======
Page Index Table address is kept in:

Question 33Select one or more:

a.
page table base register

b.
program counter

c.
stack pointer

d.
page register

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: page table base register
==
=======
The program must be specially compiled to run in paged memory.

Question 34Answer
True
False
Feedback
The correct answer is 'False'.
==
=======
The microkernel of the operating system performs the following role:

Question 35Select one or more:

a.
Runs programs

b.
Synchronizes processes

c.
It receives interrupts and routes them to the appropriate drivers and other layers of the system

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: Synchronizes processes, It receives interrupts and routes them to the appropriate drivers and other layers of the system
==
=======
The sweeping mechanism consists in:

Question 36Select one or more:

a.
Moving programs around in memory to eliminate fragmentation

b.
Loading pages into the primary memory and sending them to the disk

c.
Loading segments into primary memory and sending them to disk

d.
Merging adjacent free memory blocks

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Loading segments into primary memory and sending them to disk
Q==
=========
Swap area is placed in:

Question 37Answer

a.
Primary memory

b.
Index tables

c.
Virtual memory

d.
Mass memory

Feedback
The correct answer is: Mass memory
===
=======
How does the operating system call the task completion subroutine?

1.

Answer 1 Question 38
builds an interrupt vector on the system stack pointing to the terminating subroutine code

2.

Answer 2 Question 38
sets the trace in the terminating subroutine to the current position

3.

Answer 3 Question 38
builds the frame of the terminating subroutine on the task stack

4.

Answer 4 Question 38
recreates the context programmatically and executes the IRET instruction

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.
The correct answer is: 1. → builds the frame of the terminating subroutine on the task stack, 2. → sets the trace in the terminating subroutine to the current position, 3. → builds an interrupt vector on the system stack pointing to the terminating subroutine code, 4. → recreates the context programmatically and executes the IRET instruction
===
=======
Dynamic relocation is performed by:

Question 39Answer

a.
Loader

b.
Paging system

c.
Compiler

d.
Linker

===
=======
MMU uses index tables to:

Question 40Select one or more:

a.
generate a logical address

b.
generate a physical address

c.
generate an effective address

d.
generate a relative address

Qu===
==========
What paging element is NOT used in real-time systems?

Question 41Select one or more:

a.
address translation

b.
reference bits

c.
page swapping

d.
protection bits

==
======
When starting a program, how is control passed to it from the operating system?

Question 42Select one or more:

a.
jump

b.
extracode

c.
return from interrupt handler IRET

d.
jump with trace

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: return from interrupt handler IRET

==
======
A multiprogram system is one that, in principle:

Question 43Select one or more:

a.
It allows you to store many programs in mass memory

b.
It allows for storing many programs in primary memory

c.
Allows more than one program to run simultaneously

d.
It allows for running programs only one after another

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: It allows for storing many programs in primary memory
==
======
Which technique was introduced because a single task could occupy both the CPU and I/O devices?

Question 44Select one or more:

a.
Interrupts

b.
Multiprogramming

c.
Preemptive scheduling

d.
Buffering

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answer is: Interrupts
==
=======
What are the functions of the kernel?

Question 45Answer

a.
Program management

b.
Memory management

c.
File management

d.
Interrupt handling

Feedback
The correct answer is: Interrupt handling
==
=======
Semaphores are used to solve the problem:

a.
races

b.
Belady problem

c.
process scheduling

d.
mutual exclusion

Feedback
The correct answer is: mutual exclusion
==
=======
Static relocation is performed by:

Question 47Answer

a.
Paging system

b.
Loader

c.
Special registers (DATUM)

d.
Linker

Feedback
The correct answers are: Linker, Loader
==
=======
The hardware mechanisms necessary for paging are

 (note: "frame error" is also called "page fault", "frame fault"):

Question 48Select one or more:

a.
Address translation, page index tables, page reference bits, "frame error" interrupt, associative memory

b.
Address translation, page index tables, "frame error" interrupt

c.
Address translation, page index tables, page reference bits, "frame error" interrupt

d.

Address translation, page index tables, "frame error" interrupt, associative memory, page swapper

The correct answer is: Address translation, page index tables, "frame error" interrupt
Q===
=========
Allocation unit for file storage:

Question 49Answer

a.
may be a variable in a partition

b.
must be constant across the disk partition

c.
may differ between files on a partition

d.
It should be selected to match the characteristics of the data

Feedback
The correct answer is: must be constant across the disk partition
===
=======
What is this technique where the operating system gathers programs and data together before processing?

Question 50Answer

a.
Real-time processing

b.
Batch processing

c.
Interactive processing

d.
Distributed processing

Feedback
The correct answer is: Batch processing
===
=======

Page thrashing is a phenomenon involving:

Question 51Select one or more:

a.
frequent downloading of pages that have just been swapped out from memory

b.
frequent context changes that require page index tables to be reloaded

c.
loading the same page over and over again

d.
frequently changing the values of bits describing pages in frames

===
=======
Using the Test-And-Set instruction in synchronization:

Question 52Select one or more:

a.
It requires processes to actively wait

b.
Requires the use of semaphores

c.
Requires organizing inactive waiting in queues

d.
Stops the processor if 0 is read

Q==
=========
The scheduler decisions take the form:

Question 53Select one or more:

a.

change from waiting to ready state

b.
change from active to ready state

c.
change from waiting to active state

d.
change from ready to active state

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: change from ready to active state
==
=======
Dynamic relocation is performed by:

Question 54Answer

a.
Segment descriptors

b.
Compiler

c.
Special registers (LIMIT)

d.
Paging system

Feedback
The correct answers are: Paging system, Segment descriptors
==
=======
Calling the program with the "exec" operation results in (accurately to the result of the exec operation):

Question 55Select one or more:

a.
Loading a code segment from disk, duplicating data segments and the calling process stack

b.
Loading code and data segments from disk, initializing a new stack segment

c.

Loading a code segment from disk, duplicating the data segment of the calling process

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: Loading code and data segments from disk, initializing a new stack segment
==
=======
In operating system:

Question 56Select one or more:

a.
some exceptions are handled, some not

b.
timer interrupt may not be handled

c.
every exception must be handled

d.
the decision to handle an exception or not is made dynamically

Feedback
Twoja odpowiedź jest poprawna.

The correct answer is: every exception must be handled
==
=======
The page fault exception is specific in that:

Question 57Select one or more:

a.
is reported in the "middle" of an instruction execution

b.
execution of the instruction may require decrementing the program counter

c.
continuation of the instruction execution may require the saving of internal processor registers storing intermediate values

d.
there is no return to the program from it

Feedback

Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 2.
The correct answers are: is reported in the "middle" of an instruction execution, execution of the instruction may require decrementing the program counter, continuation of the instruction execution may require the saving of internal processor registers storing intermediate values
Q===
=========
Twice consecutive execution in one process of operation P on a raised binary semaphore:

Question 58Select one or more:

a.
Decreases semaphore value by 2

b.
If a semaphore guards a critical region, it leads to a deadlock

c.
Causes the semaphore to get down

d.
It doesn't change anything

Feedback
Twoja odpowiedź jest poprawna.

The correct answers are: If a semaphore guards a critical region, it leads to a deadlock, Causes the semaphore to get down
==
=======
BEST-FIT algorithm:

Question 59Select one or more:

a.
Requires sorting the cut part into the list of free blocks

b.
Requires a descending sort of the list of free blocks

c.
It allows for quick determining whether there is a free block of the required size

d.
Avoids external fragmentation

Feedback
Twoja odpowiedź jest częściowo poprawna.

You have correctly selected 1.
The correct answers are: It allows for quick determining whether there is a free block of the required size, Requires sorting the cut part into the list of free blocks
===
=======
Which swapping algorithms use page reference history?

Question 60Select one or more:

a.
LRU

b.
LFU

c.
NRU

d.
working set

e.
second chance

f.
FIFO

g.
working set clock

Feedback
Twoja odpowiedź jest niepoprawna.

The correct answers are: LRU, LFU
===
=======
What is the average time in the system for tasks in the batch, using SJF algorithm?

task

1

2

3

4

processing time

3.4

6.4

2.7

1.1

Answer:Question 61
6.4
Feedback
The correct answer is: 6.4
===
Assuming that memory cells are 1-byte, the page number in the address field is 11 bits, the offset is 13 bits, the frame number is 12 bits, and all entries in the TIS page index table are on a 32-bit word boundary, please enter:

- the maximum size of the program's physical memory in MB

Answer:Question 63
32
Feedback
The correct answer is: 32
===
In RAID 4, data is placed in Strips that are "scattered" over the data disks, so that each subsequent strip is on the next data disk, modulo the number of disks. For this, there is a parity disk that holds the parity bits of zeroth bits, first bits, second bits, etc., equal-numbered strips divided by the number of data disks, for example, strips 0-3, 4-7, 8-11, etc.:

the start of strips 0,1,2,3 looks like this:

0

1

0

0

1
Parity disk

0

0

0

0

0

Disk 3

1

0

1

1

0

Disk 2

1

1

0

1

0

Disk 1

0

1

1

0

0

Disk 0

In the parity strip, the values are placed so that the parity bit keeps the corresponding strip bits 0-3 odd.

Disk 3 has been damaged and reads only 0. After replacing the disk with a new one, what values should be put in the strip on disk 3?

Answer:Question 62
11111
Feedback
The correct answer is: 10110
##

##

############### File: DocumentTrf.txt #########
##
The process context includes:
a.Process descriptor
b.General purpose registers
c.The content of the file containing the program
d.External devices registers
The correct answers are: General purpose registers , Process descriptor
The optimal scheduling algorithm in terms of minimizing the average time in the system of a given task is:
a.FCFS
b.S.J.F
c.time slicing
d.priority

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: SJF
Scheduler function is:
and.scheduling tasks on the processor
b.changing task priorities
c.selecting a task to run
d.counting the CPU time used by tasks

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: selecting a task to run
What does the kernel do when there is no task (process) to run?
a.switches off the power supply
b.executes an infinite loop in the kernel until a task arrives
c.resets the entire system
d.starts the idle task

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: starts the idle task
With indulgent scheduling, once a CPU is allocated to a task, the task keeps it until:
a.transition a task from the active state to the ready state
b.releasing the processor by the task
c.task termination
d.transition a task from the ready state to the active state
The correct answers are: task termination, releasing the processor by the task
Imprecise interrupts are:
a.transferred in any state of the processor, not just between the execution of successive instructions
b.unblocked in any state of the processor, not just between executions of instructions
c.accepted in any state of the processor, not just between the execution of successive instructions
d.issued in any state of the processor, not just between the execution of successive instructions

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: accepted in any state of the processor, not just between the execution of
successive instructions
The following situations trigger "error" exceptions:
a.an attempt to execute an instruction from the area of   the page for which the "no code" bit was set
b.a reference to memory that is not in the program address space
c.memory reference in the area of   the page that is not in memory
d.memory reference beyond limit register value
The correct answers are: a reference to memory that is not in the program address space, memory
reference beyond limit register value, an attempt to execute an instruction from the area of   the page for
which the "no code" bit was set

Sequence of actions when starting a new task:

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: 1. → filling in the descriptor in the kernel, 2. → memory allocation if this is the first task of the program, 3. → initialize the stack, fill the first frame, 4. → instruction to transfer control to the task

The scheduler decisions take the form:
a.change from active to ready state
b.change from ready to active state
c.change from waiting to ready state
d.change from ready to waiting state

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: change from ready to active state
Interrupt vector:
a.contains the ID of the process that should be restarted
b.it is saved automatically when an interrupt is accepted
c.contains minimal information that cannot be saved programmatically
d.contains the instruction counter, condition bits, interrupt mask, and general purpose registers
The correct answers are: it is saved automatically when an interrupt is accepted, contains minimal information that cannot be saved programmatically
By definition , a deadlock is a situation where:
a.any greater than one number of processes are waiting for conditions that cannot be met
b.exactly two processes are waiting for conditions that cannot be met
c.at least two processes are waiting for conditions that cannot be met
d.any greater than zero number of processes are waiting for conditions that cannot be met

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: any greater than zero number of processes are waiting for conditions that cannot be met
When an exception is raised in user mode, the operating system switches to the kernel system stack, and what happens when an exception is raised in system mode?
a.switches to the next kernel system stack
b.switches back to the application program stack
c.nothing special, it builds the context on the kernel system stack
d.initializes the kernel system stack from the scratch

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: nothing special, it builds the context on the kernel system stack
Interrupt mask:
a.can unblock interrupts when the interrupt handler completes
b.must be part of the status register
c.can be set and reset by special processor instructions
d.causes interrupts to be disabled when an interrupt is accepted
The correct answers are: causes interrupts to be disabled when an interrupt is accepted, can unblock interrupts when the interrupt handler completes, can be set and reset by special processor instructions
Scheduling aims to optimize:
a.reaction time
b.processor utilization
c.wait time
d.throughput system
The correct answers are: processor utilization, system throughput, wait time, reaction time
Which scheduler needs to make a decision the fastest?

a.short-term
b.long-term
c.additional
d.medium-term

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: short-term
What is true about system level threads?
a.All process threads can share the same set of open files.
b.All process threads share the same address space.
c.Thread switching does not require interaction with the operating system.
d.All process threads can share the same set of child processes.
Feedback
The correct answers are: All process threads can share the same set of open files., All process threads share the same address space., All process threads can share the same set of child processes.
What mechanism is part of time-sharing systems?
a.short-term scheduler
b.long-term scheduler
c.medium-term scheduler
d.swapping

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: short-term scheduler
Using the Test-And-Set instruction in synchronization:
a.Requires an explicit relinquishment of the processor to another process
b.Requires organizing inactive waiting in queues
c.It requires processes to actively wait
d.Stops the processor if 0 is read
Your answer is correct.

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: It requires processes to actively wait
In the "current" state, there is a process that:
a.fills the CPU idle time
b.waits for a processor
c.occupations and processor
d.waits for an I/O operation to complete

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: occupies a processor
There are three processes in the system:
C - calculation process (batch process performing complex calculations lasting several hours),
T - text editor (user edits text document)
K - compiler (the user compiles the program, eg in C++).
Assign processes to priorities in the operating system from the highest to the lowest priority.
highest [T]
intermediate [K]
lowest [C]
Which mechanism is a part of Time-sharing systems?
a.Short-Term Scheduler
b.no scheduler is needed
c.Medium-Term Scheduler
d.Long-Term Scheduler

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

The correct answer is: Short-Term Scheduler
At the suspended state is a process that:
a.waits for a processor
b.fills the processor idle time
c.waits for an I/O operation to complete
d.occupations and processor

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: waits for an I/O operation to complete
SJF selects the task:
a.with the least CPU requirement
b.which was last placed in the queue
c.who waited the longest in the queue
d.which was first placed in the queue

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: with the least CPU requirement
How does the operating system call the task completion subroutine?

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: 2. → sets the trace in the terminating subroutine to the current position, 4. →
  recreates the context programmatically and executes the IRET instruction, 3. → builds an interrupt
vector on the system stack pointing to the terminating subroutine code, 1. → builds the frame of the
terminating subroutine on the task stack
The multi-level interrupt controller includes :
a.Collective interrupt mask
b.The register of interrupt being serviced
c.Individual interrupt mask
d.Priority encoder
The correct answers are: Collective interrupt mask , Individual interrupt mask , Priority encoder
When is the scheduler called?
a.when the scheduler decides itself
b.at the end of the execution of each kernel procedure
c.at the request of a user task
d.at the start of execution of each kernel procedure

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The correct answer is: at the end of the execution of each kernel procedure
Semaphores are used to solve the problem:
a.races
b.Belady problem
c.process scheduling
d.mutual exclusion

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: mutual exclusion
The direct resume rule means that:
a.The resuming process applies for the critical region just like other processes on monitor input
b.The resuming process loses the critical region
The resuming process loses a critical region
c.The summarizing process gets a critical region after the resumed process exits the monitor
The correct answers are: The resuming process loses the critical region , The resuming process applies
for the critical region just like other processes on monitor input
Using the Test-And-Set instruction in synchronization:
a.Requires organizing inactive waiting in queues

b.It requires processes to actively wait
c.Requires the use of semaphores
d.Stops the processor if 0 is read

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: It requires processes to actively wait
The result of cooperation of concurrent processes:
a.it is always deterministic
b.it may depend on how processes are scheduled
c.it can be non-deterministic
The correct answers are: it may depend on how processes are scheduled , it can be non-deterministic
What is the average time in the system for tasks in the batch, using SJF algorithm?
The system is equipped with 2 processors
task
1
2
3
4
processing time
3.4
5.5
3
1.1

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
The correct answer is: 4.3

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