Operating System Exam intake 42, IoT and Tel.
Duration: 60 minutes

Required

1

Enter Your Name:Required to answer. Single line text.

2

What Is Your Track?

- IoT
- Tel.
- ERP

3

Process is a passive entity.

(2 Points)

- True
- False

Active

4

Operating System Protection refers to a mechanism for controlling access by programs, or users to system resources.

(2 Points)

- True
- False

5

The user program deals with logical addresses; it never sees the real physical addresses.

(2 Points)

- True
- False

6

Cloud computing can be defined as a new style of computing in which dynamically scalable and virtualized resources are provided as a network service.

(2 Points)

- True
- False

7

The System calls are calling for hardware interrupts.

(2 Points)

- True
- False

software

8

Bootstrap program is loaded after power-up or reboot.

(2 Points)

True

False

9

Open(Ni) – as a File operation- means: move the content of entry Ni in memory to directory structure on disk.

(2 Points)

True

False

10

Any process may pass data to other process.

(2 Points)

True

False

11

The one program running at all times on the computer is the kernel.

(2 Points)

True

False

12

By using the virtual memory, the logical address space can be much larger than physical address space.

(2 Points)

True

False

13

We can describe the Process Control Block (PCB) as:

(2 Points)

It is just used by operating system designers for design purpose

A way to transfer a process between different types of operating systems

Each process is represented in the operating system by a PCB

type of addressing

14

Interrupt transfers control to the interrupt subroutine (subprogram) generally, through the:

(2 Points)

Interrupt vector

Interrupt service routine.

Interrupt sector.

- [ ] Interrupt section

15

Device Queue is:
(2 Points)

- [ ] A set of all processes in the system
- [ ] A set of all processes residing in main memory, ready and waiting to execute.
- [x] A set of processes waiting for an I/O device.
- [ ] A set of terminated processes

16

One of the scheduling optimization ways is minimizing:
(2 Points)

- [ ] Turnaround time of each process.
- [ ] Average waiting time of processes.
- [ ] Response time for each process.
- [x] All of the above.

17

All the following are directory operations except:
(2 Points)

- [x] Read from a File.
- [ ] Search for a file.
- [ ] Delete a file.
- [ ] Rename a file

18

Client-Server system is a type of:
(2 Points)

- [ ] Multi-Processor systems
- [ ] Desktop Systems
- [ ] Clustered Systems
- [x] Distributed System

19

In memory management, compaction is an operation to reduce:
(2 Points)

- [ ] Internal Fragmentation
- [x] External Fragmentation
- [ ] Overhead allocation problem
- [ ] None of the above

20

Traps or exceptions are happening because:
(2 Points)

- [x] Error, division by zero or invalid memory access
- [ ] A process need to call an API of its operating system
- [ ] A process communicates another process
- [ ] All of the above

21

The types of addressing in a computer system:
(2 Points)

- [x] Physical address
- [ ] Real address
- [x] Logical address
- [ ] None of the above

22

The base register is a register which include:
(2 Points)

- [x] The first physical address of the currently running program
- [ ] The first logical address of the currently running program
- [ ] The first physical address of the finished program
- [ ] The first logical address of a waiting program

23

The types of deployment models of cloud – way of access to the cloud- are:
(2 Points)

- [x] Private
- [x] Public
- [x] Community
- [x] Hybrid

24

Select the file access methods from the following:
(2 Points)

- [ ] Random Access
- [x] Sequential Access
- [x] Direct Access
- [ ] None of the above

25

The Deadlock can arise if the following conditions hold simultaneously:
(2 Points)

- [x] Mutual Exclusion
- [x] Hold and wait
- [x] Circular wait
- [x] No preemption resources

26

For any modern time-sharing operating system, select the common available process operations which may be managed:
(2 Points)

- [x] Creation/termination
- [ ] Memory compaction
- [ ] Open/close file
- [ ] Going to trap module

27

Select the most appropriate statement to describe the relations between a child process and its parent process:
(2 Points)

- [x] OS does not allow a child process to continue after termination of its parent.
- [ ] OS allows a child process to continue after termination of its parent.
- [ ] OS allows a child process to be created without parent process.
- [ ] There is no relation between a child process and its parent process.

28

The Dispatch latency is:
(2 Points)

- [ ] Time to get a process from ready queue to be running in CPU.
- [x] Time it takes for the dispatcher to stop one process and start another running.
- [ ] Time to remove all the processes from ready queue.
- [ ] None of the above.

29

Select the advantages of virtual machines from the following:
(2 Points)

- [x] Run operating systems where the physical hardware is unavailable
- [x] Emulate more machines than are physically available
- [ ] Enhance the memory management performance
- [x] Run legacy systems

30

Any process may be at one of the following states:
(2 Points)

- [x] Ready
- [x] Running
- [ ] Interrupting
- [x] Waiting

31

Select the file allocation Methods from the following:
(2 Points)

- [x] Contiguous Allocation
- [x] Linked Allocation
- [x] Indexed Allocation
- [ ] Discrete Allocation

32

Multi-tasking system is a:
(2 Points)

- [x] Multi-programmed batch system
- [x] Time-Sharing system
- [ ] Simple Batch system
- [ ] None of the above

33

Ready Queue is:
(2 Points)

- [ ] A set of all processes in the system
- [x] A set of all processes residing in main memory, ready and waiting to execute.
- [ ] A set of processes waiting for an I/O device.
- [ ] A set of terminated processes

34

The Deadlock problem is:
(2 Points)

- [x] A set of blocked processes each holding a resource and waiting to acquire a resource held by another process in the same set
- [ ] Any number of blocked processes more than 2 processes
- [ ] More than two processes wait I/O operations
- [ ] None of the above

35

Short-term schedulers used to:
(2 Points)

- [ ] Select which job to be putting into ready queue

long-term

- [ ] Select which job to be running next.
- [ ] Release all processes from Operating System.
- [ ] All of the above

36

The process which spend most of its time doing I/O requests is called:
(2 Points)

- [ ] CPU-Bound Process
- [ ] Active Process.
- [ ] Passive Process.
- [ ] I/O-Bound Process

37

Select the system calls categories from the following:
(2 Points)

- [ ] File management
- [ ] Device Management
- [ ] Process control
- [ ] Hardware maintenance
- [ ] Communications

38

Some of the main reasons of processes cooperation are:
(2 Points)

- [ ] Data sharing.
- [ ] Modularity.
- [ ] Speedup the performance.
- [ ] All of the above

39

How to satisfy a request of size n from a list of free holes in main memory- in Dynamic Storage-Allocation technique:
(2 Points)

- [ ] First-fit
- [ ] Best-fit
- [ ] Worst-fit
- [ ] All of the above.

40

The main function of the process dispatcher:
(2 Points)

- [ ] Gives control of the CPU to the selected process to be run by the short-term scheduler.

- [ ] Takes control of the CPU from the selected process to be run by the short-term scheduler.
- [ ] Release all the processes from ready queue.
- [ ] None of the above.

41

The requirements for any process are:
(2 Points)

- [x] CPU Burst time
- [x] Size of needed memory
- [x] The needed I/O devices
- [x] The needed files

42

The meaning of preemptive CPU scheduling schema is:
(2 Points)

- [ ] Waiting for another process.
- [ ] Bring a process from ready queue.
- [x] Process is releasing the CPU before finishing its execution to execute another process.
- [ ] None of the above.

43

The advantages of Multi-processing system:
(2 Points)

- [x] Increase throughput
- [x] Increase reliability
- [x] If CPU fail, other CPU's pick up work
- [x] All of the above

44

Some of Scheduling Algorithms are:
(2 Points)

- [x] First Come First Serviced.
- [ ] Ideal Job First.
- [x] Priority.
- [x] Round Robin.

45

The data file types are:
(2 Points)

- [x] Numeric
- [x] Character
- [x] Binary

- [x] All of the above

46

Advantages of using virtual memory are:
(2 Points)

- [x] Logical address space can therefore be much larger than physical address space
- [x] Allows address spaces to be shared by several processes
- [x] Allows for more efficient process creation
- [ ] Start the new process very fast

47

Which of the following are file attributes:
(2 Points)

- [x] Type.
- [ ] Delete.
- [x] Location.
- [x] Protection

48

In case of using FCFS scheduling algorithm, the average waiting time for the situation is:
(2 Points)

- 23/4.
- 45/4.
- 43/4.
- 36/4.

49

In case of using Non-preemptive Shortest Job First (SJF) scheduling algorithm, the process P3 starts at time unit:
(2 Points)

- 7.0
- 17.0
- 27.0
- 8.0

50

In case of using preemptive Priority scheduling algorithm, the waiting time for process P3 is:
(2 Points)

- 8
- 7

15

17

51

In case of using Round Robin scheduling algorithm (with quantum 5), the process P4 ends its work at time unit:
(2 Points)

10.0

19.0

17.0

25.0

52

In case of using preemptive Shortest Job First (SJF) scheduling, the response time for processes P1, P2, P3, P4 are:
(2 Points)

0, 15, 0, 0

0, 10, 0, 0

5, 10, 15, 20

0, 5, 3, 7

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