OS TRIVIA

OS Trivia: Paging is implemented in:

- ✓ **Operating Systems**

Hardware
Software
All the above

OS Trivia: Paging increases the _____ time.

- ✓ **context – switch**

All of these
waiting
execution

OS Trivia: The operating system maintains a _____ table that keeps track of how many frames have been allocated, how many are there, and how many are available.

page

- ✓ **frame**

mapping
memory

OS Trivia: With paging there is no _____ fragmentation.

- ✓ **external**

internal
either type of
None of these

OS Trivia: The _____ table contains the base address of each page in physical memory.

- ✓ **page**

process
memory
frame

OS Trivia: Physical memory is broken into fixed-sized blocks called _____.

- ✓ **frames**

pages
backing store
None of these

OS Trivia: The relocation register helps in :

- ✓ **to protect the address spaces of processes**

providing more address space to processes
a different address space to processes
None of these

OS Trivia: The operating system and the other processes are protected from being modified by an already running process because :

- ✓ **every address generated by the CPU is being checked against the relocation and limit registers**

they are in different logical addresses

they are in different memory spaces
they have a protection algorithm
OS Trivia: In fixed sized partition, the degree of multiprogramming is bounded by _____.
- ✓ **the number of partitions**

the memory size
the CPU utilization
All of these
OS Trivia: The operating system is
- ✓ **in the low memory**

in the high memory
either a or b (depending on the location of interrupt vector)
None of these
OS Trivia: A process is thrashing if
it is spending more time paging than executing
it is spending less time paging than executing
page fault occurs
- ✓ **swapping can not take place**

OS Trivia: Swap space exists in
- ✓ **secondary memory**

Primary memory
CPU
none of the mentioned
OS Trivia: Which of the following is false about SJF?
Only S1
Only S2
- ✓ **Both S1 and S2**

Neither S1 nor S2
OS Trivia: Which of the following statements are true?
I. Shortest remaining time first scheduling may cause starvation
II. Preemptive scheduling may cause starvation

III. Round robin is better than FCFS in terms of response time
- ✓ **I, II and III**

I only
I and III only
II and III only
OS Trivia: Scheduling Algorithms
Which of the following process scheduling algorithms may lead to starvation?
- ✓ **SJF**

FIFO
Round Robin
None of the above
OS Trivia: SRJ Scheduling Algorithm
Assume you have three processes arriving at time zero, with total execution time of 10, 20 and 30, respectively. Each process spends the first 20% of execution time doing I/O, the next 70% of time doing computation,

and the last 10% of time doing I/O again. The operating system uses a shortest remaining compute time first scheduling algorithm and schedules a new process either when the running process gets blocked on I/O or when the running process finishes its compute burst. Assume that all I/O operations can be overlapped as much as possible. For what percentage of time does the CPU remain idle?

0 %

- ✓ **10.6 %**

40 %

89.6 %

OS Trivia: Multiple threads belonging to the same process may be assigned to other:

None of the above

Applications

Programs

Processes

- ✓ **All of the above**

OS Trivia: Consider the dinning philosopher problem with N philosophers and N+1 chopsticks: Deadlock exists if:

- ✓ **all the philosopers picks the chopstics at exact same time**

none of the above

chopstics are picked in random order

all of the above

chosptics are picked counter clockwise

OS Trivia: Assume you implemented an application using the many-too one thread model, if a thread gets blocked on an I/O operation do other threads in the process gets blocked?

All threads within the process will be blocked

- ✓ **The calling thread will be blocked**

All threads requesting an I/O will be blocked

None of the above

OS Trivia: If a thread opens a file for writing:

Only threads in the same process can read

- ✓ **None of the above**

All of the above

Other thread in other process can read the file

OS Trivia: The process selected to "run/resume execution" gets control of the CPU through?

- ✓ **Dispatcher**

Scheduler

Kernel

System Call

OS Trivia: Assume that the value of a counting semaphore was 5.Then 20 wait() operations and 15 signal() operations were executed on this semaphore. The resulting value of the semaphore is:

- ✓ **0**

35
5
40
None of the above
OS Trivia: The system is in safe sate if:
- ✓ **the system can allocate resources to each process in some order and**
- ✓ **still avoid a deadlock.**

all what is mentioned.
the system does not collabse due to deadlock occurrence.
the state keeps the system protected.
OS Trivia: A deadlock avoidance algorithm will always inspect the _____, in order to make sure that a circular wait condition can never exist.
- ✓ **resource allocation state**

process sate
thread state
system storage state

OS Trivia: A system is in safe state if:
- ✓ **the system can allocate resources to each process in some order and**
- ✓ **still avoid a deadlock.**

there exist a safe sequence.
no resource can be forcibly removed from a process holding it.
a process may hold allocated resources while awaiting assignment of other resources.
OS Trivia: A deadlock can be cracked if we:
abort one or more processes to break the circular wait.
- ✓ **preempt some resources from one or more of the deadlocked processes.**

abort all the process in the system.
preempt all resources from all processes.
OS Trivia: Using mutual exclusion ensures that a system avoids deadlock?
- ✓ **False**

True
OS Trivia: Software interrupts are:
Asynchronous
Synchronous
OS Trivia: A context switch takes place at every system call?
False
- ✓ **True**

OS Trivia: What information is stored in a thread control block (TCB)?
- ✓ **Stack pointer**

List of open files
Memory map
Thread owner ID
OS Trivia: In monitor, the shared data variables accessible only by
Monitor's Procedures
- ✓ **Procedures**

Monitor
None

OS Trivia: In Semaphores, two or more processors can cooperate by means of simple

- ✓ **Signals**

Data
Register
Buffers

OS Trivia: In readers/writers problems, Readers are processes that are not required to Exclude

- ✓ **True**

False

OS Trivia: A signal is a software mechanism that informs a

- ✓ **Process**

Processor
User
Program

OS Trivia: To solve the dining philosophers, the monitor consist of two

- ✓ **Procedures**

Users
Programs
Applications

OS Trivia: In implementation of Semaphores, for a single processor system, it is possible to inhibit

- ✓ **Interrupts**

Deadlock
Lock Step
None of the above

OS Trivia: If the semaphore value is negative :

a) its magnitude is the number of processes waiting on that semaphore

- ✓ **c) no operation can be further performed on it until the signal operation is performed on it**

b) it is invalid
d) None of these

OS Trivia: The main disadvantage of spinlocks is that :

- ✓ **b) they require busy waiting**

a) they are not sufficient for many process
c) they are unreliable sometimes
d) they are too complex for programmers

OS Trivia: Spinlocks are :

c) locks that work better on multiprocessor systems
d) All of these

- ✓ **CPU cycles wasting locks over critical sections of programs**

b) locks that avoid time wastage in context switches

OS Trivia: A monitor is a type of :

c) high level synchronization construct

- ✓ **semaphore**

b) low level synchronization construct
d) None of these
OS Trivia: Resolution of externally defined symbols in source code is performed by

- ✓ **Linker**

Compiler
None of the above
Loader
Assembler
OS Trivia: Bug means
A logical error in a program
A difficult syntax error in a program
All of the above

- ✓ **None of the above**

OS Trivia: Which of the following are(is) Language Processor(s)
All of the above

- ✓ **compilers**

None of the above
assembles
interpreters
OS Trivia: Interprocess communication

- ✓ **allows processes to synchronize activity**

is required for all processes
is never necessary
OS Trivia: Fork is

- ✓ **the creation of a new process**

the creation of a new job
the dispatching of a task
increasing the priority of a task
None of the above
OS Trivia: A system program that combines the separately compiled modules of a program into a form suitable for execution

- ✓ **linking loader**

assembler
cross compiler
load and go
None of the above

OS Trivia: Process is

- ✓ **a program in execution**

program in High level language kept on disk
contents of main memory
a job in secondary memory
None of the above
OS Trivia: To avoid the race condition, the number of processes that may

be simultaneously inside their critical section is

- ✓ **1**

8

2

0

None of the above