OS_CIA3_Component 2_MCQ

Your email will be recorded when you submit this form.

Not **ayushman.gurung@science.christuniversity.in**? Switch account

* Required

In round robin CPU scheduling as time quantum is increased the average turnaround time

- ○ decreases
- ○ increases
- ○ remains constant
- ◉ varies irregularly

Clear selection

At a particular time of computation the value of a counting semaphore is 7. Then 20 WAIT operations and 15 SIGNAL operations were completed on this semaphore. The resulting value of the semaphore is :

- ○ 7
- ○ 12
- ○ 42
- ◉ 2

Clear selection

Semaphore is a/an _____ to solve the critical section problem

- ○ special program for a system
- ◉ integer variable
- ○ None of these
- ○ hardware for a system

Clear selection

Consider a uniprocessor system where new processes arrive at an average of five processes per minute and each process needs an average of 9 seconds of service time. What will be the CPU utilization ?

- ○ 30 %
- ◉ 75 %
- ○ 80 %
- ○ 60 %

Clear selection

Solve the following problem

Consider the following set of processes, with the length of the CPU burst time given in milliseconds and arrival time as given in the following table. Time Quantum (q=20 ms).

Process ID	Arrival Time	Burst Time
1	0	53
2	0	17
3	0	68
4	0	24

Calculate the average response time for these processes using Round Robin scheduling algorithm.

- ○ 30.5 ms
- ◉ 28.5 ms
- ○ 25.6 ms
- ○ 24.8 ms

Clear selection

Match the following

Match the following

List -I	**List – II**
a. Multilevel feedback queue	i. Time-slicing
b. FCFS	ii. Criteria to move processes between queues
c. Shortest process next	iii. Batch processing
d. Round robin scheduling	iv. Exponential smoothening

- ○ a-iv, b-iii, c-ii, d-i
- ○ a-i, b-iii, c-ii, d-iv
- ○ a-iii, b-i c-iv, d-ii
- ◉ a-ii, b-iii, c-iv, d-i

Clear selection

What is Dispatch latency?

- ○ the time of dispatching a process from running to ready state and keeping the CPU idle
- ◉ the time to stop one process and start running another one
- ○ the speed of dispatching a process from running to the ready state
- ○ none of the mentioned

Clear selection

To overcome difficulties in Readers-Writers problem, which of the following statement/s is/are true? (i) Writers are given exclusive access to shared objects (ii) Readers are given exclusive access to shared objects (iii) Both Readers and Writers are given exclusive access to shared objects

- ◉ (i) only
- ○ (iii) only
- ○ Both (ii) and (iii)
- ○ (ii) only

Clear selection

Which of the following condition is required for deadlock to be possible?

- ◉ all of the mentioned
- ○ no resource can be forcibly removed from a process holding it
- ○ a process may hold allocated resources while awaiting assignment of other resources
- ○ mutual exclusion

Clear selection

Cached and interleaved memories are ways of speeding up memory access between CPU's and slower RAM. Which memory models are best suited (i.e. improves the performance most) for which programs? (i) Cached memory is best suited for small loops.(ii) Interleaved memory is best suited for small loops(iii) Interleaved memory is best suited for large sequential code.(iv) Cached memory is best suited for large sequential code.

- ○ (i) and (ii) are true
- ◉ (i) and (iii) are true
- ○ (iv) and (ii) are true
- ○ (iv) and (iii) are true

Clear selection

Multithreaded programs are :

- ○ lesser prone to deadlocks
- ○ not at all prone to deadlocks
- ◉ more prone to deadlocks
- ○ None of the mentioned

Clear selection

What is the degree of multiprogramming?

- ◉ the number of processes executed per unit time
- ○ the number of processes in memory
- ○ the number of processes in the I/O queue
- ○ the number of processes in the ready queue

Clear selection

A process is selected from the _____ queue by the _____scheduler, to be executed.

- ○ wait, long term
- ○ ready, long term
- ◉ ready, short term
- ○ blocked, short term

Clear selection

The two atomic operations permissible on semaphores are : (choose two)

- ☐ stop
- ☐ hold
- ☑ wait
- ☑ signal

Solve the following problem

Consider the following set of processes, with the length of the CPU burst time given in milliseconds and the arrival time as given in the following table.

Process ID	Arrival Time	Burst Time
1	0	4
2	1	7
3	2	6
4	3	5
5	4	10

What is the average turnaround time for these processes using FCFS scheduling?

- ○ 20.4 ms
- ○ 17.4 ms
- ◉ 15.2 ms
- ○ 16.8 ms

Clear selection

An I/O bound program will typically have _____

- ○ many very short I/O bursts
- ○ a few very short I/O bursts
- ○ a few very short CPU bursts
- ◉ many very short CPU bursts

Clear selection

Binding of instructions and data to memory addresses can be done at _____

- (●) All of the mentioned
- ( ) Load time
- ( ) Compile time
- ( ) Execution time

Clear selection

A situation where several processes access and manipulate the same data concurrently and the outcome of the execution depends on the particular order in which access takes place is called :

- (●) race condition
- ( ) data consistency
- ( ) aging
- ( ) starvation

Clear selection

The dining – philosophers problem will occur in case of :

- ( ) 6 philosophers and 5 chopsticks
- (●) 5 philosophers and 5 chopsticks
- ( ) 3 philosophers and 5 chopsticks
- ( ) 4 philosophers and 5 chopsticks

Clear selection

Consider five processes, P1, P2, P3, P4 and P5, with CPU burst times of 10, 24, 3, 17, and 12 milliseconds respectively. Arrival order P1, P2, P3, P4, P5. What is the average waiting time of processes using Shortest Job First(SJF) algorithm.

- ○ 17.4 ms
- ◉ 18.6 ms
- ○ 16.6 ms
- ○ 15.7 ms

Clear selection

REGISTER NUMBER *

2041107

Which of the following conditions does not hold good for a solution to a critical section problem?

- ○ No two processes may be simultaneously inside their critical sections
- ○ No assumptions may be made about speeds or the number of CPUs.
- ○ Processes do not wait forever to enter its critical section.
- ◉ Processes running outside its critical section may block other processes.

Clear selection

If all processes I/O bound, the ready queue will almost always be _____ and the Short term Scheduler will have a _____ to do.

- ○ empty, lot
- ○ full, lot
- ○ full, little
- ◉ empty, little

Clear selection

Page 1 of 1

Submit