

Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University), Coimbatore-641043

Master's Degree Examination –November 2018
Semester – I

Class: I PG
Major: Computer Science

Max.Marks:60
Time: 3 Hours

17MCSC03 ADVANCED OPERATING SYSTEMS

PART-A

10X1/2=5

1. Operating System is a _____.
a) interface b) interrupt c) compiler d) None of the above
2. if a process fails, most operating system write the error information to -----.
a) log file b) another running process c) new file d) process file
3. The strategies for dealing with deadlocks are _____.
a) Just ignore the problem b) Detection and Recovery
c.) Dynamic Avoidance and prevention d) All the above
4. ____ is the situation where a process is waiting for an event that only another process in the same situation have the resource
a) Deadlock b) Starvation c) Spinlock d) None of the above
5. Resources previously granted cannot be forcibly taken away from a process is called _____.
a) Mutual exclusion condition b) Hold and wait condition
c) No preemption condition d) None of the above
6. Which scheduling algorithm allocates the CPU first to the process that requests the CPU first?
a) First-come, first-served scheduling b) Shortest job scheduling
c) Priority scheduling d) Last come, last served scheduling
7. Who introduced Semaphore variable?
a) Dennis Ritchie b) E.W. Dijkstra c) Bjarne stroustrup d) None of the above
8. The strategy of LRU paging -----
a) When a page fault occurs, throw out the page that has been unused for the longest time
b) Throw out the page that has been used recently
c) When a page fault occurs, throw out the page that has been used for the longest time
d) None of the above
9. MULTICS is called _____.
a) Multiplexed Information and Communication System
b) Multiple Interrupt and component system
c) Multiplexed Information and Computing System
d) Multiplexed Instructional and Computing System
10. Which bit is called dirty bit?
a) Protection bit b) Modified bit c) Referenced bit d) Cleared bit

PART-B

Answer All Questions

5X4=20

Answer should not exceed 200 words or one page

11. (a) Write a short note on Process Control Block (PCB) by explaining its utility in process management.
(or)
(b) List at least 4 reasons for process termination. Also discuss the need for the Suspend state.
12. (a) What is race condition? How process synchronization is helpful to guard against race condition?
(or)
(b) Discuss Bounded Buffer problem of process synchronization.
13. (a) What is swapping in memory management? Why address binding is used in swapping?
(or)
(b) What is the role of paging in memory management scheme?
14. (a) Outline the Client Server Model.
(or)
(b) Outline the Distributed System.
15. (a) Criticize Mobile OS.
(or)
(b) Criticize Real time OS.

PART-C

Answer all Questions

5X7=35

Answer should not exceed 600 words or three pages

- 16.(a) What is critical section problem and explain two process solutions and multiple process solutions?
(or)
(b) How Deadlock can be detected If each resource has single instance and many instances?
- 17.(a) Briefly describe the various states a process can have? Also discuss the state transition diagram.
(or)
(b) List at least 4 reasons for process termination. Also discuss the need for the Suspend state?
18. (a) Briefly describe Preemptive Vs Non Preemptive Scheduling.
(or)
(b) Describe about Scheduling Techniques.
19. (a) Detail Description About Threads.
(or)
(b) Describe about Hard ware and Soft ware Concepts.
20. (a) Illustrate Linux Operating Systems.
(or)
(b) Express Windows Operating Systems.
