

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. WAN stands for _____
(a) Wifi Area Network (b) Wide Area Network
(c) Won Area Network (d) None of these
2. The most common network protocol is _____
(a) FTP (b) HTTP
(c) TCP/IP (d) SMTP

3. RMI stands for _____ method Invocation.
(a) Real (b) Rear
(c) Remote (d) ROM
4. The _____ producer-customer problem assumes a fixed buffer size.
(a) unbounded-buffer (b) static-buffer
(c) bounded-buffer (d) constant
5. The conditions of policy must be present for a deadlock.
(a) mutual exclusion (b) no preemption
(c) hold and wait (d) all
6. A schedule where each transaction is executed atomically is called a _____.
(a) serial schedule (b) serializing
(c) nonserial schedule (d) scheduling

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7. _____ uses demand loading of process components to give the illusion of a large memory.
(a) RAM (b) Virtual memory
(c) HDD (d) All the above
8. Segmentation is a memory management scheme that supports the _____ of memory.
(a) physical view (b) user view
(c) combined view (d) conceptual view
9. The creation of a file system in a magnetic disc is _____.
(a) low level formatting (b) physical formatting
(c) logical formatting (d) all the above
10. Expansion of UFD is _____.
(a) Unique File Directory
(b) User File Directory
(c) User Format Dictionary
(d) User Filter Directory

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) What is real-time system? Describe the advantages of real-time systems.
Or
(b) Write about Handheld system.
12. (a) Explain the operations on processes.
Or
(b) Write and explain the CPU scheduling FCFS algorithm.
13. (a) What are the methods for handling deadlocks?
Or
(b) Discuss binary semaphore in detail.
14. (a) Discuss about segmentation with paging.
Or
(b) Explain about LRU page replacement algorithm.
15. (a) Explain file concepts in detail.
Or
(b) Describe swap space management.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Describe multiprocessor and distributed systems with their advantages and disadvantages.

Or

- (b) Explain about mainframe systems and desktop systems.

17. (a) What is process? Explain the basic concepts and the importance of inter processes communication.

Or

- (b) Explain about classical Problems of synchronization.

18. (a) Explain about deadlock prevention and avoidance.

Or

- (b) How to detect and recover from a deadlock?

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19. (a) With a diagram, explain the concept of inverted page table.

Or

- (b) Write about paging and segmentation.

20. (a) Explain the following file operation
(i) creating a file (ii) writing a file (iii) reading a file (iv) repositioning within a file (v) deleting a file (vi) truncating a file.

Or

- (b) Explain about RAID.

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