

APRIL 2017

50416/SAE5A

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What is an operating system?
2. Give the functions of 'dispatcher' in CPU scheduling.
3. Define : Binary semaphore.
4. State the necessary conditions for having deadlock.
5. Write the advantage of a spinlock.
6. Distinguish between frames and pages.
7. What is known as 'segmentation' in memory management?
8. Name the two types of memory fragmentation.
9. Draw the schematic view of a virtual file system.
10. Define : meta data.
11. Give the role of protection in a computer system.
12. Define : Access matrix.

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(C.S)

SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Explain the features of distributed and client-server systems.
14. List and briefly explain the operating system components.
15. Describe the Dining-philosophers problem.
16. Write a note on overlays.
17. What is called as thrashing? Explain in detail.
18. Discuss the key aspects of tree - structured directories.
19. How are the authenticity of user's identity determined? Explain.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Explain the issues with interprocess communication facility.
21. What are the methods used for handling deadlocks? Explain any one in detail.

22. Describe the contiguous memory allocation.
23. Elaborate the LRU and FIFO page replacement techniques.
24. Explain the Kernel I/O subsystem.