

APRIL 2019

50416/SAE5A

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What is a layered structure of an operating system?
2. What are Batch systems?
3. What is the critical section problem?
4. Define deadlock.
5. What is a logical address space and physical address space?
6. Define dynamic loading.
7. What are overlays?
8. What is Demand paging?
9. What are the various file operations?
10. What is the information associated with an open file?

111 B.sc (CS) - Operating Systems.

11. Specify the types of security threats.
12. What is Password – based authentication?

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Explain in detail about Distributed Operating systems and its advantages.
14. Discuss about
- (a) Hard real – time systems
 - (b) Soft real – time systems
15. Write any five properties of Semaphores.
16. Write short notes on Handling Deadlock.
17. Discuss :
- (a) Single partition allocation
 - (b) Multiple partition allocation
18. Explain briefly the First-In-First-Out (FIFO) algorithm with an example.
19. What is one time password? Explain the various ways of implementing OTP.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Explain in detail about Process Scheduling Queues with a neat diagram.
21. Discuss briefly the Dining – Philosophers Problem with a suitable example.
22. Discuss in detail about Fragmentations and their types.
23. (a) Explain the concept of Demand Paging and their advantages.
(b) Explain the importance of Page Replacement Algorithm.
24. Explain briefly the Transforming I/O Requests to Hardware Operations.