

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FOURTH SEMESTER INTEGRATED MCA DEGREE EXAMINATION (R,S), MAY 2024

(2020 SCHEME)

Course Code: 20IMCAT206

Course Name: Operating Systems

Max. Marks: 60

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

1. What is a time sharing operating system?
2. Write about any three system calls in operating system.
3. Which are the states of a process in operating system?
4. Give the role of dispatcher in scheduling.
5. Write a short note on semaphores.
6. Discuss resource allocation graph with respect to deadlock.
7. Differentiate between logical and physical addresses in operating system.
8. List out the various causes of thrashing.
9. Explain FCFS disk scheduling scheme.
10. Write short notes on file attributes.

PART B

(Answer one full question from each module, each question carries 6 marks)

MODULE I

11. Discuss the services provided by the operating system for efficient system operation. (6)

OR

12. Explain real time, distributed and embedded operating systems. (6)

MODULE II

13. a) Describe about long-term, short-term, and medium-term scheduling. (3)
b) What are the components of process control block? Explain. (3)

OR

14. Demonstrate FIFO and round robin CPU scheduling algorithms with suitable examples. (6)

MODULE III

15. a) What is deadlock? (2)
b) Explain the techniques used to prevent the deadlocks. (4)

OR

16. Explain inter process communication in detail. (6)

MODULE IV

17. Explain the concept of demand paging with a neat diagram. (6)

OR

18. Illustrate LRU page replacement algorithm with the help of an example. (6)

MODULE V

19. Discuss the various file allocation methods. (6)

OR

20. Write in detail the different file access methods. (6)
