

.Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FOURTH SEMESTER INTEGRATED M.C.A DEGREE EXAMINATION (S), SEPT 2022

(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. List any three operating system services.
2. What are system calls?
3. Compare long term and short term schedulers.
4. Draw process state transition diagram.
5. Explain inter process communication.
6. Write a short note on deadlock.
7. Explain swapping.
8. Write a note on thrashing.
9. Describe the working of FCFS disk scheduling algorithm.
10. Explain any three file attributes.

PART B

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

MODULE I

11. Compare multiprogramming operating systems with time-sharing systems. (6)

OR

12. Explain any four functions of operating system. (6)

MODULE II

13. Give details about the following CPU scheduling algorithms with examples. (6)
- i. FCFS
 - ii. SJF

OR

14. What is meant by a process? Explain the five process states and draw the PCB. (6)

MODULE III

15. Explain wait(S) and signal(S) of a semaphore S. Describe its usage and implementation. (6)

OR

16. What are the four necessary conditions for a deadlock to occur? Illustrate with an example. (6)

MODULE IV

17. Compare any two page replacement algorithms with examples. (6)

OR

18. Explain paging with a neat diagram. (6)

MODULE V

19. What are the most common schemes for defining the logical structure of a directory? Explain. (6)

OR

20. Explain the various file allocation methods. (6)
