

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER M.C.A DEGREE EXAMINATION (S), SEPT 2022
(2020 Scheme)

Course Code: 20MCAT152

Course Name: ADVANCED OPERATING SYSTEMS

Max. Marks: 60

Duration:

3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

- 1 Write a short note on critical section problem.
- 2 What are Lamport's Logical clocks?
- 3 How do you measure the performance of mutual exclusion algorithm?
- 4 What is the use of access matrix model?
- 5 Explain the important goals of distributed file systems.
- 6 List and explain the issues in load distributing.
- 7 What are the types of hypervisors?
- 8 Write a short note on paravirtualization.
- 9 What are the basic synchronization primitives for concurrency control?
- 10 What is meant by serializability?

PART B

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

MODULE I

- 11 Explain the design approaches for an operating system. (6)

OR

- 12 Describe the issues in distributed operating system. (6)

MODULE II

- 13 What is the use of Rickart-Agrawala algorithm? Explain. (6)

OR

- 14 Explain access control list and its uses. (6)

MODULE III

- 15 Elaborate on the mechanisms for building distributed file systems. (6)

OR

- 16 Explain any two algorithms for implementing distributed shared memory. (6)

MODULE IV

17 Explain the basic multiprocessor system architectures. (6)

OR

18 Write a note on virtualization. (6)

MODULE V

19 Explain an optimistic concurrency control algorithm in database systems. (6)

OR

20 Explain two-phase locking algorithm in detail. (6)
