

22639

M. Tech. 1st Semester (CSE) (CBCS Scheme)
Examination, November-2023
ADVANCED OPERATING SYSTEMS
Paper-MTCSE21C2

Time allowed : 3 hours] [Maximum marks : 100

Note: Question No. 1 is compulsory. Attempt five questions in total, first being compulsory and selecting one question from each unit.

1. Write short note on the following: $5 \times 4 = 20$
- (a) Concurrent Processes
 - (b) Agreement Protocol
 - (c) Voting Protocol
 - (d) Fault Tolerance

Unit-I

2. What is an Operating System? Explain the various types for Advanced Operating System in detail. 20
3. (i) Differentiate between Consumable and re-usable Resources. 10
- (ii) Explain the Critical Section Problem. 10

Unit-II

4. Explain the following: $2 \times 10 = 20$
- (a) Distributed deadlock detection
 - (b) Distributed mutual exclusion

22639-P-2-Q-9 (23)

[P. T. O.]

(2)

22639

5. What is Distributed File System? Explain Distributed Scheduling and related issues in detail. 20

Unit-III

6. Write short note on the following:
- (a) Dynamic Voting Protocol 7
 - (b) Two-phase commit protocols 7
 - (c) Non-blocking commit protocols 6
7. What is Recovery? Explain the concept of recovery in concurrent system. 20

Unit-IV

8. Explain the concept of Concurrency Control. Describe the various Concurrency Control Algorithms in detail. 20
9. (i) Explain the concept Processor scheduling for database operating system. 10
- (ii) What is Distributed Database System? Explain its various design issues, advantages and disadvantages. 10

22639