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: 5×4=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: 2×10=20

   (a) Distributed deadlock detection

   (b) Distributed mutual exclusion

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