

Roll No. _____

22639

**M.Tech. 1st Semester (CSE) CBCS Scheme
Examination – February, 2022
ADVANCED OPERATING SYSTEMS**

Paper : MTCSE21C2

Time : Three hours | Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all, selecting one question from each Unit. Question No. 1 compulsory. All questions carry equal marks.

1. Write short note on the following : 5 × 4 = 20
- (a) Process Deadlocks
 - (b) Distributed Scheduling
 - (c) Classification of Failures
 - (d) Database Operating System

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 : 10 × 2 = 20
 - (a) Suzuki-Kasami's Broadcast Algorithm
 - (b) Token Based Algorithm
- 5. What is distributed File System ? Explain its architecture and design issues in detail. 20

UNIT - III

- 6. What is Recovery ? Explain the basic approaches to recovery in detail. 20
- 7. Write short note on the following :
 - (a) Dynamic Voting Protocol 7
 - (b) Two-phase commit protocols 7
 - (c) Fault Tolerance 6

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UNIT - IV

- 8. (i) What is process synchronization ? Explain. 10
- (ii) Explain various design issue of Multiprocessor Operating system. 10
- 9. Describe the concept of Concurrency Control. Explain the various Concurrency Control Algorithms in detail. 20

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