



Seat No. : _____

DA-107
December-2025
M.Sc. (CA & IT), Sem.-IX
Distributed Operating System

Time : 2:30 Hours]

[Max. Marks : 70

1. Answer the following questions :

- (1) Define Distributed Computing System. List out different advantages of distributed operating system. 5

OR

- (1) Discuss the process of stub generation and tools used for it. 5
(2) Explain ATM Protocol Reference Model. 5
(3) List the different distributed computing system models. Explain the minicomputer model in detail with a diagram. 4

2. Answer the following questions :

- (1) Explain RPC model in detail. 5
(2) Discuss main features of ATM Technology. 5
(3) Explain Synchronization in message passing. 4

OR

- (3) Explain Single-Message Buffer and Unbounded Capacity Buffer. 4

3. Answer the following questions :

- (1) Discuss implementation issues of distributed shared memory. 5

OR

- (1) Explain Pipelined Random-Access Memory Consistency Model and Processor Consistency Model in detail. 5
(2) Explain Centralized Approach for mutual exclusion in distributed operating system. 5
(3) Explain Ring election algorithm in detail. 4

4. Answer the following questions :

- (1) Discuss issues in designing Load-Sharing algorithm. 5

OR

- (1) Explain in detail Task Assignment Approach. 5
(2) Describe process migration and explain its benefits in distributed systems. 5
(3) Explain in detail Request/Reply Protocol with suitable diagram. 4

5. Answer the following questions :

(1) Explain the desirable features of a good distributed file system with examples. 5

OR

(1) Explain different file sharing semantics in detail. 5

(2) Discuss various file accessing models and their significance. 5

(3) Differentiate human-oriented names and system-oriented names with suitable examples. 4
