

Exam. Code : 208601
Subject Code : 4811

M.Sc. Information Technology 1st Semester
(Batch 2021-23)

DISTRIBUTED COMPUTING

Paper : MIT-102

Time Allowed—3 Hours] [Maximum Marks—100

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The **fifth** question may be attempted from any section. All questions carry equal marks.

SECTION-A

1. What are the features of distributed systems ? Discuss the software issues of different types of distributed systems. 20
2. (a) What are the issues associated with communication layered protocols ? Explain. 10
(b) Discuss the RPC for communication in distributed systems. 10

SECTION-B

3. (a) Why consistency is required in distributed systems ? Explain. 10
(b) Discuss the role of broadcast in synchronization. 10

4. Discuss the following concepts : 10

- (a) Synchronization in threads 10
- (b) Clocks and their types

SECTION-C

5. Explain the following :

- (a) Replication of Peer-to-Peer systems 10
- (b) Broadcast in distributed systems 10
- (a) Discuss the performance measures for parallel Computing. 10

- (b) How replication is implemented in distributed computing ? Explain. 10

SECTION-D

7. Discuss the architecture for distributed shared memory and message passing. 20

8. Write short notes on the following :

- (a) Security techniques 10
- (b) Cache coherence 10