

Exam. Code : 208601  
Subject Code : 4811

M.Sc. Information Technology 1<sup>st</sup> 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 :  
(a) Synchronization in threads 10  
(b) Clocks and their types 10

**SECTION-C**

5. Explain the following :  
(a) Replication of Peer-to-Peer systems 10  
(b) Broadcast in distributed systems 10
6. (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