

Exam. Code : 208601

Subject Code : 4705

M.Sc. Information Technology 1st Semester

DISTRIBUTED COMPUTING

Paper-MIT-102

Time Allowed—3 Hours] [Maximum Marks—100

Note :— Attempt **five** questions, selecting at least **one** question from each Section and the **fifth** question may be attempted from any Section. All questions carry equal marks.

SECTION-A

1. What are the objectives of using distributed systems ? Discuss the architecture of different types of distributed systems. 20
2. (a) How communication is carried out using client server protocols for distributed systems ? Explain. 10
(b) Discuss the procedure for implementing RPC communication in distributed systems. 10

SECTION-B

3. (a) Explain the concept of synchronization in distributed systems. 10
(b) Discuss the role of different types of clocks in synchronization. 10

4. Discuss the following concepts :

- (a) Thread synchronization. 10
- (b) Transaction consensus. 10

SECTION-C

5. (a) How group models for service replication are implemented ? Explain. 10
(b) Compare the models of client server and RPC. 10
6. (a) Compare client server and peer to peer Computing. 10
(b) Differentiate multicast and atomic broadcast. 10

SECTION-D

7. How security in distributed system is achieved ? Discuss the procedure for implementing the cryptographic algorithms. 20
8. Write short notes on the following :
(a) Distributed shared memory. 10
(b) Access control in Distributed Computing. 10