

Exam. Code : 208601

Subject Code : 3693

M.Sc. Information Technology 1st Semester

MIT-102 : DISTRIBUTED COMPUTING

Time Allowed—Three 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 classifications of distributed systems ? Discuss the software issues of different types of distributed systems. 20
2. (a) How communication is carried out using layered protocols for distributed systems ? Explain. 10
(b) Discuss the procedure for implementing group communication in distributed systems. 10

SECTION—B

3. (a) Explain the concept of consistency in distributed systems. 10
(b) Discuss the role of different types of threads in synchronization. 10
4. Discuss the following concepts :
(a) Logical clocks synchronization 10
(b) Mutual exclusion. 10

SECTION—C

5. (a) How peer to peer models for service replication are implemented ? Explain. 10
- (b) Compare the models of peer to peer and RPC. 10
6. (a) Compare parallel and distributed computing. 10
- (b) Differentiate reliability of multicast and atomic broadcast. 10

SECTION—D

7. Discuss cryptographic and access control methods for implementing security in distributed systems. 20
8. Write short notes on following :
- (a) Distributed shared memory architecture 10
- (b) Cache coherence. 10