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

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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