Exam. Code : 208602
Subject Code : 4127

M.Sc. Information Technology 2nd Semester

DISTRIBUTED DATABASES

Paper—MIT–202

Time Allowed—3 Hours]   [Maximum Marks—100

Note :— Attempt **FIVE** questions in all, selecting at least **one** question from each section and the **fifth** question may be attempted from any section.

SECTION—A

1. (a) Discuss the features of distributed database management system architecture.   10

   (b) What are the advantages of distributed database management system ? Explain.   10

2. Explain the following concepts :

   (a) Autonomy of DDBMS   10

   (b) Peer to Peer Distributed system   10

SECTION—B

3. (a) State and explain the information requirements for vertical fragmentation.   10

   (b) What are different alternatives for Distributed Relational database design ? Explain.   10

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4. Discuss the following concepts in detail :

    (a) Allocation Problem for DDBMS   10

    (b) Information Requirements for hybrid fragments. 10

SECTION—C

5. What is meant by query processing and optimization ? Explain the centralized query optimization algorithm in detail.   20

6. Write notes on the following concepts :

    (a) Query Decomposition   10

    (b) Localization of Distributed Data   10

SECTION—D

7. Explain centralized Two-Phase locking control mechanism in distributed systems.   20

8. (a) What are the objectives of distributed concurrency control ? Explain.   10

    (b) How is serializability achieved in distributed databases ? Explain.   10