14739

M. Tech 2nd Semester Examination
Distributed Database Management System

MT-203

Time: 3 Hours
Max. Marks: 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

1. Attempt two parts of the following: (2×10=20)
   (a) List the advantages and disadvantages of DDBMS.
   (b) What are four reasons for fragmenting a relation?
   (c) Explain the terms: Primary copy update strategy and Global deadlock.

2. Attempt two parts of the following: (2×10=20)
   (a) Explain various transparencies in a distributed DBMS.
   (b) What is distributed deadlock management? And what are three common methods for handling deadlock detection in DDBMS?
   (c) What are distributed Joins? Explain.

3. Attempt two parts of the following: (2×10=20)
   (a) What is meant by the degree of local autonomy?
   (b) What is mixed fragmentation? Give an example.
   (c) Explain various architectural models for distributed DBMS.
4. Attempt any two parts of the following: \(2 \times 10 = 20\)
   (a) What are the problems encountered in DDBMS while considering concurrency control and recovery?
   (b) Discuss the naming problem in distributed DDBMS.
   (c) Why is data replication useful in DDBMS? What typical units of data are replicated?

5. Discuss briefly any five parts of the following: \(5 \times 4 = 20\)
   (a) 3-tier architecture for DBMS.
   (b) Failures in DDBMS.
   (c) Abstraction and Data Integration.
   (d) Data Associations.
   (e) Normalization.
   (f) Checkpointing.