



B.TECH.

THEORY EXAMINATION (SEM-VI) 2016-17

DISTRIBUTED DATABASE

Time : 3 Hours

Max. Marks : 100

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

SECTION – A

- 1. Explain the following:** **10 x 2 = 20**
- (a) What is a cascade less schedules?
 - (b) State serializability. How it is tested?
 - (c) Differentiate strict two phase locking protocol and rigorous two phase locking protocol.
 - (d) What are the timestamps associated with each data item?
 - (e) Define replication.
 - (f) What is Fragmentation? Give its types.
 - (g) Provide the Concepts in Orphan in distributed database.
 - (h) How database recovery can be done?
 - (i) What the difference is between distributed and replicated database?
 - (j) Define Distributed Deadlock detection.

SECTION – B

- 2. Attempt any five of the following questions:** **5 x 10 = 50**
- (a) Compare conflict and view serializability with example.
 - (b) Explain timestamp based concurrency algorithms in detail.
 - (c) State the purpose of 2PC protocol. Explain 2PC in detail.
 - (d) Explain the need for the two-phase commit protocol. Then describe the two phases.
 - (e) Illustrate the cost based query optimization for Distributed Database in detail.
 - (f) Mention about Recovery in Message Passing System. Explain concept of inconsistent states.
 - (g) What are Multiversion Schemes? Explain its importance in Multiversion Protocol.
 - (h) Describe query optimization algorithms.

SECTION – C

- Attempt any two parts of the following questions:** **2 x 15 = 30**
- 3** Explain how the transactions are managed in a distributed database. Also differentiate between Homogeneous and Heterogeneous Database.
 - 4** Brief about Traditional recovery techniques with example.
 - 5** What are the objects of distributed query processing? Explain.

