Printed Pages : 1 Roll No. NCS067

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 serializabilty 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.

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