(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2713 Roll No. | | | | | | | | | |

B.Tech.

(SEM. VII) ODD SEMESTER THEORY EXAMINATION 2013-14

DISTRIBUTED DATABASE

Time : 3 Hours *Total Marks : 100*

Note :– Attempt all questions.

1 Attempt any **two** parts from the following : **(10×2=20)**

(a) Discuss the advantages of Distributed Database Systems. Describe Transaction Model. What are the termination conditions of a transaction ?

(b) Explain serializability theory. Describe view serializability with an example.

(c) Give architectural models for Distributed DBMS. What do you mean by distributed data processing ?

2 Attempt any **two** parts from the following : **(10×2=20)**

(a) What is Lock ? Describe locking based concurrency control algorithms.

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(b) Describe how a non-recoverable situation could arise if write locks are released after the last operation of a transaction but before its commitment. What are the advantages and drawbacks of multiversion timestamp ordering in comparison with the ordering timsestamp ordering ?

(c) Describe the architecture for locking scheduler.

3 Attempt any **two** parts from the following : **(10×2=20)**

(a) What do you mean by Fragmentation ? Explain horizontal and vertical fragmentation with examples.

(b) Explain allocation problem. Describe any algorithm for allocation.

(c) What is Replica ? Explain Replication Techniques.

4 Attempt any **two** parts from the following : **(10×2=20)**

(a) Discuss Issues of recovery and atomicity in distributed database.

(b) What is Recovery Line ? Describe an algorithm to determine the recovery line.

(c) What is checkpointing ? Discuss a checkpointing based method for recovery in distributed database.

5. Attempt any **two** parts from the following : **(10×2=20)**

(a) Explain Deadlock Management in brief. Differentiate communication deadlock and resource deadlock.

(b) Explain semi join-based algorithms and distributed query optimization algorithms. Explain distributed cost model with an example.

(c) Write short note on Eager and Lazy Replication Techniques.

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