

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

PAPER ID : 2713 Roll No.

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B. Tech.

(SEM. VII) THEORY EXAMINATION- 2011-12

DISTRIBUTED DATABASE

Time : 3 Hours

Total Marks : 100

Note :- Attempt all questions.

1. Attempt any **two** parts of the following : **(10×2=20)**
 - (a) Explain popular applications of databases. Compare distributed database with centralized databases.
 - (b) Explain the methods for concurrency control in distributed transactions.
 - (c) Explain conflict and view serializability with example. Also differentiate between them.

2. Attempt any **two** parts of the following : **(10×2=20)**
 - (a) What do you mean by two-phase locking ? How it is different from strict 2-phase locking ? Explain briefly.
 - (b) Explain Lock based protocol in detail. What is the role of time stamp based protocol in Locking ?
 - (c) Describe architecture for locking scheduler.

3. Attempt any **two** parts of the following : **(10×2=20)**
- (a) Explain Flat and Nested Distributed Transaction with suitable example.
 - (b) What is Replication ? Explain important types of replication Techniques.
 - (c) Write short notes on :
 - (i) Fragmentation (ii) Distributed commit/abort conditions.
4. Attempt any **two** parts of the following : **(10×2=20)**
- (a) Explain Issues of Recovery in distributed database. Explain types of failure in distributed system.
 - (b) What is check point based Recovery ? Give the advantages and disadvantages of different types of check point based recovery method.
 - (c) What is Recovery in Message Passing Systems ? Explain concept of inconsistent states.
5. Attempt any **two** parts of the following : **(10×2=20)**
- (a) Define Distributed Deadlock detection algorithms. Write explain path pushing algorithm for distributed dead lock Detection.
 - (b) Explain Multiway joins and semi joins with example.
 - (c) Write short notes on :
 - (i) Distributed query processing
 - (ii) Lazy Replication Techniques.