Total No. of Questions : 8] *[Total No. of Printed Pages :2*

Roll No .....

MCSE-203

M.E./M.Tech., II Semester

Examination, December 2014

Advance Concept in Data Bases

Time : Three Hours

Maximum Marks : 70

Note: Attempt any five questions. All questions carry equal marks.

1. a) What are major anomalies in a database? Explain the method to deal with these anomalies, with a suitable example.
   b) Why is BCNF a more desirable normal form than lower forms? Give an example of a relational scheme that is in third normal form but not in BCNF. Also explain using an example why it is not practically feasible always.

2. a) What is semijoin operation? How can it be used in distributed query processing? Describe with the help of an example.
   b) Enumerate and illustrate the problems which may motivate an organisation to move towards the database approach. Identify the most important factor inhibiting an organisations move towards a DBMS?

3. a) What are mobile databases? Discuss the characteristics of mobile databases. Give an application of mobile database.
   b) What is query optimization? Describe with the help of an example.

4. a) What is the differences between persistent and transient objects? How is persistence handled in typical object oriented database system?
   b) What are the different problems that arise in a distributed DBMS Environment for concurrency control and recovery purpose.

5. a) What is Data Marts? How is it different from data warehouse? How the management of data in a database, is different from the management of data in a data warehouse? Explain using example.
   b) Describe major challenges to data mining regarding data mining methodology and user interaction issues.

6. a) What are the basic update strategies in the context of recovery? Explain with the help of an example.
   b) Write a brief notes on ORDBMS design and ORDBMS Query Language.

7. a) Write all the steps for distributed database design and explain.
   b) Write a brief notes on pipelining and materialization.

8. Write short notes on the following:
   a) Structure of Query Evaluation Plans
   b) Snowflake schema and fact constellations
   c) Clustering based disaster-proof databases
   d) Relational calculus.

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