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Roll No

MCSE - 203**M.E./M.Tech., II Semester**

Examination, December 2015

Advance Concept in Data Bases*Time : Three Hours**Maximum Marks : 70*

Note : i) Attempt any five questions.
 ii) All questions carry equal marks.

1. a) Why is the normalization process necessary for a good database design? Discuss in detail the Boyce codd normal form with suitable example. 7
 b) Discuss the entity integrity and referential integrity constraints. Why is each considered important. 7
2. a) Explain the difference between two tier and three tier architectures. Which is best suited for web applications? Why? 7
 b) Why is it not desirable to force users to make explicit choice of a query processing strategy? Are there cases in which it is desirable for users to be aware of the costs of competing query processing strategies? Explain your answer. 7
3. a) Discuss cost estimation in query optimization. 7
 b) What is meant by heuristic optimization? Discuss the main heuristics that are applied during query optimization. 7

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4. a) What is a commit protocol and why is it required in a distributed database? What is blocking and how does the three phase protocol prevent it? 7
 b) Explain the following: 7
 i) Time stamp protocol for concurrency control
 ii) OODBMS and compare it with RDBMS
5. a) Explain mobile databases in detail. Give an application of mobile database. 7
 b) What is the difference between persistent and transient object? How is persistence handled in typical object oriented database system? 7
6. a) Discuss ORDBMS database design issues and illustrate your discussion using an example application. 7
 b) What processes and specializations are involved in the storage of data in a warehouse? 7
7. a) Discuss the role of information visualization in data mining. 7
 b) What are the objectives of data mining? Discuss spatial data mining. 7
8. Write short notes: 14
 a) Data reduction
 b) Star schema
 c) Fact constellations
 d) Object data management group
