M.Tech(with Credits)-Regular-Semester 2012-Computer Science and Engineering Sem II

MT-1007 - Advanced Databases

P. Pages : 1 **GUG/W/16/3940**

Time : Three Hours * 4 7 4 0 * Max. Marks : 70

Notes : 1. Attempt **any five** questions.

1. a) What is normalization? Explain different normal forms with example. **7**

b) What is embedded SQL? Give and explain the fragment of a C program with embedded SQL statements. **4**

c) Explain dynamic SQL. **3**

2. a) Explain JDBC – ODBC connection. **6**

b) Differentiate between : **6**
i) Object Databases and Relational databases.
ii) XML documents and objects

c) What is object? Explain the structure of object. **2**

3. a) What is data fragmentation? Explain different methods of data fragmentation with example. **6**

b) Explain OLAP with help of detailed architectural diagram. **6**

c) What is meant by fragmentation transparency and location transparency. **2**

4. a) What is quarry processing? Explain how heuristic query optimization is performed with example. **7**

b) What is distributed transaction? Explain Hierarchical model and peer model of distributed transaction. **7**

5. a) Draw and explain three – tiered distributed transaction processing system. **7**

b) Explain how 2-phase commit protocol ensures global atomicity? **7**

6. a) Explain distributed deadlock. **6**

b) What are the different types of recovery approaches in database crash. **8**

7. a) Write short notes on : **8**
i) Global serialization. ii) Replicated databases.

b) What is serializability? Explain conflict serializability with example. **6**

8. a) What is database tuning? What are the goals of database tuning? List the typical inputs to tuning process. **6**

b) What is statistical database? Discuss the problems of statistical database security. **8**

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