Code No: V0523 **R07** SET - 1

II B. Tech II Semester Supplementary Examinations, April/May – 2013
DATA BASE MANAGEMENT SYSTEMS
(Com. to CSE, IT)

Time: 3 hours Max. Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Explain how data can be managed in different views.
   b) Explain DBMS throughout its historical perspectives.

2. a) Explain the additional features of ER Model.
   b) Explain briefly about class hierarchies and aggregation.

3. Distinguish between key constraints, foreign key constraints and general constraints with an example.

4. Consider the following relations & write the queries in SQL,
   suppliers (sid: integer, sname: string, address:string)
   parts (pid: integer, pname: string, colorL: string)
   catalog (sid: integer, pid: integer, cost: real)
   Find pname of parts for which there is some supplier.
   Find sname of suppliers who supply every red part.
   Find sids of suppliers who supply a real part & a green part.
   For each part, find the sname of the supplier who charges the most for that part

5. Explain about normal forms and also explain different normal forms.

6. a) Explain about ACID properties
   b) Describe about timestamp based protocols.

7. a) Explain the dealing with recovery with concurrent transactions.
   b) Describe about advance recovery systems in detail.

8. a) Give a brief note on file organization & Indexing.
   b) Explain about Index data structures.
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Code No: V0523 **R07** SET - 2

II B. Tech II Semester Supplementary Examinations, April/May – 2013
DATA BASE MANAGEMENT SYSTEMS
(Com. to CSE, IT)

Time: 3 hours Max. Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Describe the relational model in DBMS and compare with other date models.
   b) What are levels of Abstraction in DBMS explain with examples

2. Briefly explain the following concepts
   a) Entity versus Attribute.
   b) Entity versus Relationship.
   c) Binary versus Ternary Relationship.
   d) Aggregation versus Ternary Relationship.

3. Discuss about Integrity constraints over relations and also explain the process Enforcing Integrity constraints.

4. What are range variables in SQL? What are nested queries? What is correlation in nested queries? What is grouping? Explain with examples.

5. Differentiate between Boyce-codd Normal form and fourth normal form.

6. a) Describe about Lock-Based concurrency control.
   b) Describe clearly about strict 2-phase locking (2PL).

7. a) Give us an overall concept for recovery & atomicity.
   b) Describe briefly about log based recovery.

8. a) Describe briefly about ISAM & B^+ trees.
   b) Explain the major working strategies in these two trees.
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Code No: V0523 **R07** SET - 3

II B. Tech II Semester Supplementary Examinations, April/May – 2013
DATA BASE MANAGEMENT SYSTEMS
(Com. to CSE, IT)

Time: 3 hours Max. Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Differentiate between file systems & DBMS.
   b) What are the advantages of DBMS in various applications?

2. a) Briefly explain about Entities, Attributes & Entity sets.
   b) Explain about Relationship & Relationship sets and differentiate between them.

3. Explain the concept of ER to relational with a clear example.

4. What are the parts of basic SQL query? Are the input and result tables of SQL query sets multi-sets? How can you obtain a set of tuples as the result of a query?

5. a) Explain completely about functional dependencies with an example.
   b) Explain about reasoning about FDS.

6. a) Explain about atomicity & durability with complete description.
   b) Describe about how the testing for serializability is done.

7. a) Illustrate the process for remote backup systems.
   b) Explain about buffer management and also about its working process.

8. Explain the concepts
   i) Cluster Indexes
   ii) Primary Indexes
   iii) Secondary Indexes
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Code No: V0523 **R07** SET - 4

II B. Tech II Semester Supplementary Examinations, April/May – 2013
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(Com. to CSE, IT)

Time: 3 hours Max. Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Give an brief explanation about transaction Management.
   b) Explain the structure of DBMS with a neat diagram.

2. a) Explain the history of database system.
   b) Explain the concepts database Design & ER model.

3. Explain the process of creating & modifying relations using SQL

4. a) What is a trigger and what are its three parts? What are differences between row level and statement level triggers?
   b) What are null values? Are they supported in the relational model? Explain with an example.

5. a) Explain the problems that are caused by redundancy.
   b) Explain about Decompositions and problems related to Decomposition.

6. a) Explain the process of concurrent Execution of Transactions.
   b) Explain about serializability and Anomalies due to interleaved Execution.

7. a) Explain the total concepts of dealing with deadlocks.
   b) Explain about specialized locking techniques.

8. a) Explain about dynamic Index structure.
   b) Describe briefly differences in hash based and tree based indexing.
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