SET- 1

Code No: 2420206

IV B. Tech II Semester Regular Examinations, April/May 2009
DATABASE MANAGEMENT SYSTEMS
(Common to E.E.E & CHEM)

Time: 3 Hours **Max. Marks 80**

Answer any FIVE questions
All questions carry equal marks
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1. How will you establish economic justification of a database system? Give necessary guide lines.

2. (a)What are views? Discuss the problems encountered in modifying database through views.
   (b)Explain about query processing.

3. (a) Explain Multi Valued Dependencies.
   (b) Explain various notations used for constructing ER diagrams.

4. (a) Give a detailed analysis of Indexed Sequential Access Method (ISAM) data structure.
   (b) Discuss the main differences between ISAM and B+ tree indexes.

5. (a)Discuss shadow paged recovery technique.
   (b) Compare and contrast between shadow paged recovery and log based recovery.

6. (a) Explain the concept of transaction atomicity.
   (b) How does the two phase locking protocol ensures serializibility?

7. Discuss about any two specialized locking techniques.

8. Write short notes on the following:
   (a) Static hashing (b) Linear hashing(c) Extendable hashing

SET- 2

Code No: 2420206

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Time: 3 Hours **Max. Marks 80**

Answer any FIVE questions
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1. (a) Discuss the structure of a database system.

   (b) Describe how to translate an ER diagram into a relational database schema.

2. (a) What is the role of SQL in a database architecture?

   (b) What are the notations used in SQL commands?

3. (a)How do views support logical data independence? How are views used for security?

   (b) How are queries on views evaluated? Why does SQL restrict the class of views that can be updated?

4. (a) What is indexing? Explain with an example.

   (b) Explain about query processing.

5. Discuss shadow paged recovery technique. In what ways this is different from log based recovery?

6. (a) Explain the concept of transaction atomicity.

   (b) How does the two phase locking protocol ensures serializability?

7. Discuss about any two specialized locking techniques.

8. Discuss about 1NF, 2NF, 3NF and BCNF in schema refinement.

SET- 3

Code No: 2420206

IV B. Tech II Semester Regular Examinations, April/May 2009
DATABASE MANAGEMENT SYSTEMS
(Common to E.E.E & CHEM)

Time: 3 Hours **Max. Marks 80**

Answer any FIVE questions
All questions carry equal marks
****

1. Explain various types of aggregate functions with suitable examples in SQL.
2. (a) Discuss the important features of a view.
   (b) Discuss how queries are evaluated on views? Why does SQL restrict the class of views that can be updated?
3. (a) What is a decomposition and how does it address redundancy?
   (b) Define functional dependencies. How are primary keys related to FDs?
4. (a) What are the advantages of ARIES recovery algorithm?
   (b) Discuss the three steps in crash recovery in Aries with suitable examples?
5. (a) Define the concept of a schedule for a set of concurrent transactions with suitable examples.
   (b) Explain how the granularity of locking affects the performance of concurrence control algorithm.
6. (a) Explain multi valued dependencies (MVD).
   (b) Define 1NF, 2NF, 3NF and BCNF. What is the motivation for putting a relation in BCNF?
7. (a) Discuss static hashing . Explain how insert and delete operations are handled in a static hash index.
   (b) Discuss the relationship between Extendible and Linear Hashing.
8. Write short notes on the following:
   (a) SQL query translation process
   (b) Equivalences of relational algebra

SET- 4

Code No: 2420206

IV B. Tech II Semester Regular Examinations, April/May 2009
DATABASE MANAGEMENT SYSTEMS
(Common to E.E.E & CHEM)

Time: 3 Hours **Max. Marks 80**

Answer any FIVE questions
All questions carry equal marks
****

1. (a) Discuss the salient features of SQL through suitable examples.

   (b) Describe the important features of a view.

2. (a) What is indexing? Explain with an example.

   (b) Explain about query processing?

3. (a) Discuss shadow paged recovery technique

   (b) Compare and contrast between shadow paged recovery and log based recovery.

4. (a) Discuss static hashing and explain how insert and delete operations are handled in static hashing.

   (b) Compare and contrast between Extendible and Linear hashing.

5. (a) Explain various notations used for constructing ER diagrams.

   (b) Discuss the importance of Multi Valued Dependencies (MVD).

6. (a) Discuss the advantages of Aries recovery algorithm.

   (b) Explain the crash recovery process in Aries with suitable examples.

7. Discuss about 1NF, 2NF, 3NF and BCNF in schema refinement.

8. Discuss about any two specialized locking techniques.