Set No. 2

II B.Tech I Semester Regular Examinations, November 2007
DATA BASE MANAGEMENT SYSTEMS
(Common to Computer Science & Engineering, Information Technology
and Computer Science & Systems Engineering)

Time: 3 hours   **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks
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1. (a) Define the concept of aggregation. Give an example of where this concept is useful.
   (b) Explain the difference between a weak and a strong entity-set.   [8+8]

2. Consider the following database.
   Employee (employee-name, street, city)
   Works (employee-name, company-name, salary)
   Company (company-name, city)
   Manager (employee-name, manager-name)
   Give an expression in the relational algebra, the tuple relational calculus, and the domain relational calculus, for the following query.
   Find the names of all employees who work for estate bank.   [16]

3. (a) Explain in detail the following
       i. join operation
       ii. Nested - loop join
       iii. Block Nested - Loop join.
   (b) For the following relational database write the expressions in SQL.
       Branch_Schema (branch_name, Branchcity, Assets)
       Customer_schema(customername, customerstreet, customercity)
       Loan_schema(Branchname, loan_number, Amount)
       Borrower_schema(customername, loan_number)
       Account_schema (Branchname, Account_number, balance)
       Depositor_schema(customername, Account_number)
       i. Find the names of all branches in Loan_Schema?
       ii. Find all customers having loan, account or both at bank?
       iii. Display customernames in alphabetical order who have a loan at the Perry ridge branch?
       iv. Find set of all customers who have an account at the bank?   [8+8]

4. (a) Define BCNF. How does BCNF differ from 3NF? Explain with an example.
   (b) Explain 3nf? Give one example?   [8+8]

5. (a) Write a short notes on
       i. Serialazability

ii. Recoverability [10]

(b) Why must lock & unlock be atomic operation? [6]

6. (a) What are the merits & demerits of using fuzzy dumps for media recovery. [6]

(b) Explain the phases of ARIES Algorithm. [4]

(c) Explain 3 main properties of ARIES Algorithm [6]

7. List the physical storage media available on the computers youu use routinely. Give the speed with which data can be accessed on each mediaum. [16]

8. (a) Compare the Ordered Indexing with Hashing.

(b) Compare Linear Hashing with extendable Hashing. [8+8]

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