Subject Code—4271

M.C.A. (Second Year) EXAMINATION

June, 2006

(5 Years Integrated Course)

(Re-appear)

MCA-202

DATABASE MANAGEMENT SYSTEM

Time : 3 Hours   *Maximum Marks :* 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) What are the structure of selection ? Explain.

    (b) What are the structure of projection ? Explain.

    (c) What is equi join ? Explain.

    (d) Explain the find and get statement.

    (e) What are the features of QBE ?

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2. Write short notes on any *three* of the following :

   (a) Conceptual Schema

   (b) Functional Dependency

   (c) Data Discription Language

   (d) Embedded SQL.

3. What is the need for normalisation of data ? What are the various techniques for normalisation in a relational database model ?

4. What are the various data models used in data bases. Explain access mechanism and the operations possible on each of them.

5. Given the following relations :
   Supplier (s#, Sname, City); S# as a key
   Parts (P, Pname, Weight, Quantity); P as a key
   Supply (S, P, Quantity); S, P as key
   Write the expression in SQL to answer the following quaries :

   (a) Find all part numbers being supplied.

   (b) Find part numbers and part names of parts held in quantity of less than 25.

(c) Find supplier names of suppliers who supply part number 3.

(d) Find supplier number of supplier who are located in the same city as the supplier named 'pink'.

(e) Find supplier numbers of supplier who supply a part other than number 3.

6. What are the various Query Optimization Technique ? Explain with examples.

7. Explain why locks are necessary in the concurrent operations on the database. Explain the algorithm for testing the serializability of a schedule.

8. What should be the objective of a distributive database system ? Explain the architecture of client server computing.