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BCA (2013 & Onward) (Sem.–4)

DATABASE MANAGEMENT SYSTEMS

Subject Code : BSBC-404

M.Code : 10069

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.**

SECTION-A

1. **Answer briefly :**

   (a) What is a Schema?

   (b) What is the meaning of integrity and accuracy in a Database?

   (c) What is the domain of an Attribute?

   (d) What is the cardinality of a relation in an E-R diagram?

   (e) Why do you mean by normalize the data?

   (f) How SQL acts as a DML?

   (g) What is meant by the term query language?

   (h) How do you add a column to a table using SQL statement(s)?

   (i) What are Entities and Attributes?

   (j) What is a Relation?

SECTION-B

2. Explain data abstraction with three layers. Why is it important?

3. Consider the following relations :

   Hotel {hotelNo, name, address}

   Room {roomNo, hotelNo, type, price}

   Booking {hotelNo, guestNo, dateFrom, dateTo, roomNo}

   Guest {guestNo, name, address}

   Write the SQL statements for the following:

   a) List the names and addresses of all guests in Chandigarh, alphabetically ordered by name.

   b) List all family rooms with a price below Rs.400 per night, in ascending order of price.

   c) How many hotels are there?

4. What is functional dependency? Discuss its types. Explain the role of Functional dependency in the process of normalization.

5. Compare relational, network and hierarchical models in detail.

6. What is database modeling? How is E-R model different from other data models? What are the main advantages of the E-R model?

7. Discuss various locking techniques used in the concurrency control.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.