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BCA (2014 to 2018)   (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 do you mean by single-valued and multi-valued attributes?

    b. What do you mean by Data Base instance and Data Base schema?

    c. What is the difference between Unique constraint and Primary key constraint?

    d. Define Entity and Attribute.

    e. What do you mean by Multivalued Dependency?

    f. What is a Tuple?

    g. What is the difference between the strong entity set and weak entity set?

    h. What is meant by domain of an attribute?

    i. What is concurrency?

    j. What is data fragmentation?

SECTION-B

2. What is ER Diagram? What are the symbols used in it? Design and Draw an ER diagram for a banking system.

3. What do you mean by Normalization? Explain the first three normal forms along with BCNF and the anomalies that exist in these normal forms with the help of suitable examples.

4. a. List various advantages of Data Base approach over Traditional File system approach.

   b. Explain the difference between Physical and Logical Data Independence.

5. Define Relational Algebra. Explain the various Relational Algebra operations with the help of examples.

6. What do you mean by Database Recovery? Explain different Recovery Techniques for non-catastrophic transaction failures.

7. What are Integrity Constraints? Explain different Integrity constraints in detail.

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.