C-385

August 2022
Bachelor of Computer Applications (BCA) Examination

Fourth Semester
BCA-403 : DATABASE MANAGEMENT SYSTEM

Time 3 Hours]

[Max. Marks 50
[Min. Marks 17

Note : **Attempt any two sub-parts of a question. All questions carry equal marks.**

1. (a) Define DBMS. What are the advantages and disadvantages of DBMS ?
    (b) Explain the 3-level schema architecture of DBMS.
    (c) What do you mean by Data Independence ? Explain Logical and Physical Data Independence.

2. (a) Define Attribute. Explain various types of attributes with example.
    (b) Explain Generalization and Specialization with the help of suitable example.
    (c) Write the various steps for reducing an ER Diagram into table.

3. (a) Define Keys. Explain different types of keys.
    (b) What are the various aggregate functions in SQL ? Explain each with example.
    (c) What are Joins ? Explain different types of Joins.

4. (a) Explain Stored Procedure with example.
    (b) What are the features of Good Relational Database Design ? Explain.
    (c) Explain Codd's Rule.

5. (a) What are different types of Normalization ? Also explain the difference between BCNF and 3NF.
    (b) Explain the different types of anomalies in Databases.
    (c) Explain Multi-Valued Dependency with example.