BCA/M-23   **1873**

RELATIONAL DATABASE MANAGEMENT SYSTEM
BCA-244

Time : Three Hours]   [Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. (a) What makes a DBMS as RDBMS ?   4

    (b) Explain the concept of functional dependency and fully functional dependency with suitable examples.   4

    (c) Elaborate any four DDL commands with suitable examples.   4

    (d) What is the full form of PL/SQL ? Explain PL/SQL character set.   4

Unit I

2. What is Relational Calculus ? Explain various types of Relational Calculus with suitable examples.   16

3. Explain the Union, Intersection, Difference, Select, Project, Product and Join Operations in Relational Algebra. Give suitable examples. **16**

Unit II

4. Define Normalization. Explain various normalization techniques with suitable examples. **16**

5. Explain the concept of relational constraints and update anomalies along with suitable examples. **16**

UNIT-III

6. Explain at least four DML and four DCL Commands in SQL along with their purpose, syntax and examples. **16**

7. Define SQL. Write short note on SQL Operators, SQL data types, Tables and Views with suitable examples. **16**

UNIT-IV

8. Explain various conditional control and loop control statements supported in PL/SQL along with their purpose, syntax and examples. **16**

9. Explain PL/SQL architecture. What are Generic PL/SQL Block and PL/SQL Execution Environment ? Write a program in PL/SQL to find sum of series (1 + 2 + 3..... + n) using appropriate control statements. **16**