

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 $(1 + 2 + 3 + \dots + n)$ using appropriate control statements. 16