

BCA/M21**1896****RELATIONAL DATABASE MANAGEMENT SYSTEM****Paper-BCA-244****Time allowed : 3 Hours****Maximum Marks : 80**

Note : Attempt **five** questions in all, selecting **one** question from each unit.
Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. (i) Write short note on Selection Operation in Relational Algebra. 4
- (ii) Write short note on Functional Dependencies and Fully Functional Dependencies. 4
- (iii) Explain various Data Types in SQL with examples. 4
- (iv) Write short note on PL/SQL Architecture. 4

UNIT-I

2. (i) Explain the 12 Codd's rules in RDBMS? 8
- (ii) Define Relational Calculus. Explain various types of Relational Calculus. 8
3. Define Relational Algebra. Explain the Projection, Join and Division Operations with suitable examples. 16

UNIT-II

4. What do you mean by Anomalies? Explain the various update anomalies in RDBMS along with suitable examples. 16
5. Explain the following normal forms along with suitable examples : 16
- (i) 1 NF (ii) 2 NF
- (iii) 3NF (iv) BCNF.

UNIT-III

6. Explain various DML and DCL Commands in SQL along with their purpose, syntax and examples. 16
7. Elaborate on Aggregate Functions, Views and Nested Queries in SQL with suitable examples. 16

UNIT-IV

8. Explain the various Control Structures in PL/SQL along with their purpose, syntax and examples. 16

9. (i) What is the purpose of Triggers in PL/SQL. Elaborate on different types of Triggers. Give suitable examples. 8
- (ii) What is the purpose of Cursors in PL/SQL. Elaborate on different types of Cursors. Give suitable examples. 8