BCA – 244 RELATIONAL DATABASE MANAGEMENT SYSTEM

Maximum Marks: 100   **External: 80**

Minimum Pass Marks: 35   **Internal: 20**

Time: 3 hours

Note: Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

UNIT – I

Relational Model Concepts, Codd's Rules for Relational Model, Relational Algebra:-Selection and Projection, Set Operation, Renaming, Join and Division, Relational Calculus: Tuple Relational Calculus and Domain Relational Calculus.

UNIT – II

Functional Dependencies and Normalization:-Purpose, Data Redundancy and Update Anomalies, Functional Dependencies:-Full Functional Dependencies and Transitive Functional Dependencies, Characteristics of Functional Dependencies, Decomposition and Normal Forms (1NF, 2NF, 3NF & BCNF).

UNIT – III

SQL: Data Definition and data types, SQL Operators, Specifying Constraints in SQL, Basic DDL, DML and DCL commands in SQL, Simple Queries, Nested Queries, Tables, Views, Indexes, Aggregate Functions, Clauses

UNIT – IV

PL/SQL architecture, PL/SQL and SQL*Plus, PL/SQL Basics, Advantages of PL/SQL, The Generic PL/SQL Block: PL/SQL Execution Environment, PL/SQL Character set and Data Types, Control Structure in PL/SQL, Cursors in PL/SQL, Triggers in PL/SQL, Programming using PL/SQL.

TEXT BOOKS:

1.   Elmasri & Navathe, "Fundamentals of Database Systems", 5th edition, Pearson   Education.
2.   Ivan Bayross, "SQL, PL/SQL-The Programming Language of ORACLE", BPB Publications 3rd edition.

REFERENCE BOOKS:

1. C. J. Date, "An Introduction to Database Systems", 8th edition, Addison Wesley N. Delhi.
2. Oracle 8 –PL/SQL programming –Scott Urman
3. A Guide to the SQL Standard, Data,C. and Darwen, H.3rd Edition, Reading, MA:1994, Addison-Wesley Publications, New Delhi.