

Paper-I: Relational Data Base Management System

Maximum Marks: 50
Minimum Pass Marks: 18
Time: 3 Hours

External: 40
Internal: 10

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. Student will be required to attempt FIVE questions in all. Question Number 1 will be compulsory. In addition to compulsory question, student will have to attempt four more questions selecting one question from each Unit. All questions will carry equal marks.

UNIT – I

Relational Model Concepts, Codd's Rules for Relational Model, Hierarchical Data Model– Introduction, Features, Components, Example, Network Data Model– Introduction, Features, Components, Example, Differences between Hierarchical Data Model and Network Data Model Comparison of Relational Data Model with Hierarchical Data Model and Network Data Model Relational Algebra:-Selection and Projection, Set Operation, Join and Division.

UNIT – II

Relational Calculus: Tuple Relational Calculus and Domain Relational Calculus.
Functional Dependencies and Normalization -- Purpose, Data Redundancy, Update Anomalies, Partial/Fully Functional Dependencies, Transitive Functional Dependencies, Characteristics of Functional Dependencies, Decomposition and Normal Forms (1NF, 2NF, 3NF & BCNF).

UNIT – III

SQL: Data Definition and data types, Create Table, Insert Data, Viewing Data, Filtering Table Data, Sorting data, Creating Table from a Table, Destroy table, Update, View, Delete, Join, Concatenating data from Table Specifying Constraints in SQL; Primary Key, Foreign Key, Unique Key, Check Constraint, Using Functions

UNIT – IV

PL/SQL-Introduction, Advantages of PL/SQL
The Generic PL/SQL Block: PL/SQL Execution Environment; PL/SQL Character Set and Data Types, Declaration and Assignment of Variables
Control Structure in PL/SQL: Conditional Control, Iterative Control, Sequential Control

TEXT BOOKS:

- Elmasri Ramez & Navathe Shamkant B., “Fundamentals of Database Systems”, Addison & Wesley, New Delhi, 2007
- Bayross Ivan, SQL, PL/SQL, “The Programming Language of Oracle”, BPB Publication, 2002

REFERENCE BOOKS:

- Date C.J., “Database Systems”, Prentice Hall of India, New Delhi, 2004

