2012
P.G. Diploma in Computer Applications
First Semester
PGD-1103: Database Management System

Time allowed: 3 Hours   Max. Marks: 60

NOTE: *Attempt* <u>*five*</u> *questions in all, including Question No. IX (Unit-V) which is compulsory and selecting one question each from Unit I - IV.*

x-x-x

UNIT – I

I.   a) What is a Database? Describe the basic Terminology of RDBMS.

    b) Describe the use of Distributed Databases in Present Scenario.   (6, 6)

II.   What is the difference between the following:-

    a) Simple and Composite Attributes

    b) Single-Valued and Multi-Valued Attributes

    c) Weak and Strong Entity Sets   (3x4)

UNIT - II

III.   a) What is Normalization? What is the need to use it? Describe various Normal Forms.

    b) Describe the similarities and differences between Relational Algebra and Relational Calculus.   (6,6)

IV.   a) Describe the locking techniques for Concurrency Control.

    b) What is the need of Database Recovery? How is it performed?   (6, 6)

UNIT - III

V.   Explain the following:-

    a) Creating a table from another table

    b) Matching a Pattern from a Table

    c) Working with Null Values

    d) Grouping the Result of a Query   (4x3)

VI.   a) What are Aggregate Functions? Why are they called so? Explain any two aggregate functions.

       b) What is the use of Dual Table? Explain any three character functions.   (6,6)

UNIT - IV

VII.   a) What is a View? How is a View created, replaced and deleted?

      b) Explain the use of different types of Joins in querying Multiple Tables.   (6, 6)

VIII.   a) How are Set operators used in querying Tables? Explain with examples.

      b) Define Transaction. Also explain the use of Commit and Rollback in managing Transactions.   (6,6)

UNIT - V

IX.   Attempt the following:-

    a) Explain the difference between Primary Key and Candidate Key.

    b) Differentiate between DDL and DML.

    c) Describe the use of IN operator in SQL Queries.

    d) What is Transitive Dependency?

    e) What is a Role?

    f) What is Nested Query?   (6x2)

x-x-x