PGDCA SEMESTER – I
DCA-102 : Database Management System

University Examination Duration : 3 Hours.

UNIT : I (10 Marks)
Database Concepts and Architecture:

Operational data, purpose of database system, structure of DBMS, three levels of the architecture, the external level, the conceptual level, the internal level, mappings, the database administrator, distributed processing.

UNIT : II (12 Marks)
Data Structure and Corresponding Operators:

Data Models: hierarchical, network and relational.

Operators, relations , domains and attributes, keys, extensions and intensions, traditional set operations, attribute – names for derived relations, special relational operations.

UNIT : III (24 Marks)
Database Design:

The E/R model, E/R diagrams, database design with the E/R model, trivial and nontrivial dependencies, closure of a set of dependencies, closure of a set of attributes, irreducible sets of dependencies, non loss decomposition and functional dependencies, first, second and third normal forms, dependency preservation, Boyce/Codd normal form, multi-valued dependencies and fourth normal form, join dependencies and fifth normal form.

UNIT : IV (24 Marks)
FoxPro:

FoxPro –Versions, features, requirement of hardware & software, working with Visual FoxPro. Creating database file, listing contents of a database file, viewing and editing data, modifying structure and file utilities, sorting and indexing, reports and labels, memory variables, creating a programming file, running a program file, conditional statements and loops, displaying data with @ command, inputting data with @.....get @...edit, wizards.

Reference Books:
1. Introduction to Database System C. J. Date (7th edition) Low Price Edition
2. SQL, PL/SQL Evan Bayross (2nd edition) BPB Publications
3. Database system concepts Henry F. Korth (3rd edition) TMH Publications
4. Mastering Visual FoxPro BPB Publications

Question Paper Scheme:
Q.1 - Unit-I (10 Marks)
    A. Objective/ Short Questions.
    B. Descriptive/ Long questions.
Q.2 - Unit-II (12 Marks)
    A. Objective/ Short Questions.
    B. Descriptive/ Long questions.
Q.3 - Unit-III (24 Marks)
    A. Objective/ Short Questions.
    B. Descriptive/ Long questions.
Q.4 - Unit-IV (24 Marks)

A. Objective/ Short Questions.
B. Descriptive/ Long questions.
C. Program in FoxPro.

Note: Options should be given in all questions.