P.G.D.C.A. Semester – II

DCA - 202 : Advance Database Management System

Teaching Scheme (per week)		Teaching Scheme (per semester)		Examination Scheme					
				Internal		External		Total	
Th. (Hours)	Pr. (Hours)	Total (Hours)	Credit	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)
4	---	40	4	30	----	70	---	100	---

Unit – I	[17 Marks]

Concepts of transaction and transaction processing
      ACID properties of transaction
      Examples of transaction
Database concurrency
      Problems of concurrency
      Concepts of two-phase locking
      Concept of Deadlocks
 	
Database recovery
      Types of Recovery	

Unit – II	**[18 Marks]**

Introduction to SQL
    SQL Components
      DDL
      DML
      DCL
      TCL
    SQL constructs (SELECT… FROM…WHERE...GROUP BY….
    HAVING….ORDER BY…)
    SQL Functions
      String Functions
      Conversion Functions
      Numeric Functions
      Aggregate Functions
    Set Operators
      Union
      Intersect
      Minus
    VIEW definition and use
    Nested queries/ Sub Queries
    Correlated nested Queries
    Joins
      Inner Join/ Simple Join
      Outer Join
          Left Outer
          Right Outer
          Full
      Self-Join
      Cross Join
      JOINs based on Operators	

	Equi Join	
	Non- Equi Join	
	Integrity constraints and its types(Domain, Entity, Referential)	
Unit – III		**[17 Marks]**

	PL\SQL-Introduction
	 Datatypes
	 Syntax
	 Block Structures
	 Conditional Control in PL\SQL
	 Cursors
	   Explicit
	   Implicit
	 Error Handling in PL\SQL	

Unit – IV		**[18 Marks]**

	Database Objects
	   Procedure
	   Function
	   Trigger
	   Index
	   Sequence	

Text & Reference Books:

1. Introduction to Database System - C. J. Date (7th edition) Low Price Edition
2. SQL, PL/SQL - Evan Bayross (2nd edition) BPB

Question Paper Scheme:

University Examination Duration : 3 Hours.

Q.1 - Unit-I   (12 Marks)
       Descriptive/ Long questions.
Q.2 - Unit-II   (12 Marks)
       Descriptive/ Long questions.
Q.3 - Unit-III   (12 Marks)
       Descriptive/ Long questions.
Q.4 - Unit-IV   (12 Marks)
       Descriptive/ Long questions.
Q.5 -
       A. Unit I and II – Objectives/Short Questions   (12 Marks)
       B. Unit III and IV – Objective/Short Questions (10 Marks)

Note: Options should be given in all questions.