SARDAR PATEL UNIVERSITY
Programme: BCA
Semester: IV
Syllabus with effect from: November/December-2012

Paper Code: US04CBCA01	Total Credit: 4
Title Of Paper: Relational Database Management System-II	

Unit	Description in detail	Weighting (%)
I	**Relational Database Design** Consequences of poor database design The process of database normalization Functional dependencies Lossless joins and dependency preservation 1st Normal Form, 2nd Normal Form, 3rd Normal Form, Boyce-Codd Normal Form Examples of normalization	25%
II	**Basics of PL/SQL** PL/SQL - Introduction and advantages Understanding PL/SQL Block structure Fundamentals of PL/SQL Language - data types (BOOLEAN, CHAR, NUMBER, DATE, VARCHAR2), variables, constants and expressions (CASE expression) Operators Conditional statement – IF and CASE statements Controlling loop iterations – LOOP, EXIT, EXITWHEN, WHILE, FOR Sequential control statement – GOTO and NULL	25%
III	**Cursors and Exception Handling** SELECT..INTO statement Working with cursor : introduction, types, attributes and processing (i.e. declaring, opening, fetching and closing), using parameterized cursor, using cursor FOR loop Error Handling : introduction, advantages of exceptions, types of exceptions Working with user-defined exceptions – declaration, Raise_Application_Error, Pragma Exception_Init, Sqlcode And Sqlerrm	25%
IV	**Stored Subprograms, Database Triggers and Packages** Stored procedures – introduction, creating, modifying, executing and dropping procedures Stored functions – introduction, creating, modifying, executing and dropping functions Database triggers – introduction, creating, modifying and dropping triggers, types of triggers Packages – meaning, advantages, creating, modifying and dropping	25%

Basic Text & Reference Books :-
- An introduction to Database Systems : Bipin C. Desai, Galgotia Poblications Pvt. Ltd.
- Ivan Bayross : SQL, PL/SQL The programming language of Oracle, 3rd revised edition, BPB Publications
- Kevin Loney, George Koch, Orale9i The Complete Reference , Oracle Press
- Buluksu Lakshman : Oracle9i PL/SQL : A developer's guide, Apress, edition 2003

Books For Additional Reading :

- Understanding Database Management Systesm : S. Parthsarthy and B.W.Khalkar, First edition – 2007, Master Academy
- P. S. Deshpande : SQL/PLSQL for Oracle9i, dreamtech press, reprint edition 2009