SARDAR PATEL UNIVERSITY
Programme: BCA
Semester: III
Syllabus with effect from: June 2019

Paper Code : **US03CBCA21**	Total Credit: 4
Title of Paper: **Database Management System - II**	

Lectures per week   : 4   **Exam Duration: 3hrs**
All units carry equal weightage.

Unit	Description in detail	Weightage (%)
1	**Relational Database Design** - Consequences of poor database design - The process of database normalization - Functional dependencies - Lossless joins and dependency preservation - Dr. E.F.Codd Rules - Difference between DBMS and RDBMS - 1st Normal Form, 2nd Normal Form, 3rd Normal Form, Boyce-Codd Normal Form - Examples of normalization - E-R modeling (different types of entities, attributes, relationships and their representation in the E-R diagram) - Case studies: Library (Book issue and return), Bank (Opening saving bank account)	25%
2	**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%
3	**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	25%

	- 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	
4	**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:-

1. An introduction to Database Systems : Bipin C. Desai, Galgotia Poblications Pvt. Ltd.
2. Ivan Bayross : SQL, PL/SQL The programming language of Oracle, 4th edition, BPB Publications
3. Kevin Loney, George Koch, Orale9i The Complete Reference , Oracle Press
4. Buluksu Lakshman : Oracle9i PL/SQL : A developer's guide, Apress, edition 2003
5. Understanding Database Management Systems : S. Parthsarthy and B.W.Khalkar, First
   a. edition 2007, Master Academy
6. P. S. Deshpande : SQL/PLSQL for Oracle9i, dreamtech press, reprint edition 2009