SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Computer Science)
Semester: VI
Syllabus with Effect from: November/December-2013

Paper Code: US06CCSC02	Total Credit: 3
Title Of Paper: Relational Database Management System	

Unit	Description in detail	Weighting (%)
I	**Relational Database Theory And Data Modeling** The Three-Schema Architecture For A Database Management System (Dbms) Introduction To Data Models (Hierarchical, Network, Relational) Examples Of Current Rdbms Products The Relational Data Model: Concepts And Terminology, Operations On Data (Ddl, Dml), Relationships And Relationship Types Integrity Constraints Codd Rules Entity-Relationship Modeling (Different Types Of Entities, Attributes, Relationships And Their Representation In The E-R Diagram) Case Studies Of Data Modeling Using E-R Modeling	25%
II	**Introduction To Sql** Sql - Introduction , Advantages And Disadvantages Data Types – Built-In (Number, Char, Varchar2, Date, Raw, Long Raw) Types Of Sql Statements : Ddl (Data Definition Language), Dml (Data Manipulation Language), Dcl (Data Control Language), Tcl (Transaction Control Language) Working With Sql*Plus – Overview And Basic Commands Like Ed, Start, Get, Save, Exit, Connect, Set Linesize, Set Pagesize And Host Creating Table And Inserting Data - Create Table, Insert, Retrieving Data Using Query – Select , Manipulating Data – Delete And Update , Modifying And Removing Table – Alter Table And Drop Table.	25%
III	**Data Constraints And Functions** Pseudo Columns – Rowid, Rownum, User, Uid, Sysdate Null Values, Tab Table, Dual Table Operators – Arithmetic, Relational, Logical, Range Searching, Pattern Matching And Set Data Constraints – Introduction, Advantages And Disadvantages Type Of Data Constraints – Not Null, Unique, Primary Key, Foreign Key And Check Modifying Constraints, Working With Data Dictionary And Use Of User_Constraints Functions – Introduction, Merits And Demerits, Types Of Functions (Scalar And Aggregate) Scalar : Numeric Functions (Abs, Floor, Mod, Power, Round, Sign, Sqrt And Trunc), Character Functions (Chr, Ascii, Concat, Initcap, Lower, Substr,Trim, Upper), Date Functions (Add_Months, Last_Day, Next_Day, Months_Between), Conversion Functions (To_Number, To_Char And To_Date) Aggregate Fun : Avg, Count, Max, Min, Sum Miscellaneous Functions – Nvl, Decode, Coalesce	25%

IV	**Query, Subquery,Joins, Transaction Management And Reporting Through Sql*Plus** Query And Subquery, Types Of Subquery Creation And Manipulation Of Database Objects – Indexes, Views, Sequences And Synonym Joining Tables, Types Of Joins (Cross Join, Natural Join, Inner Join, Equijoin, Outer Joins, Self Join. Data Control Language Statements – Grant And Revoke Transaction Control Language Statements – Commit, Rollback And Savepoint Pl-Sql Block, Cursor Function And Procedure	25%

Text 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

Basic Text & Reference Books:-

- 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