

SARDAR PATEL UNIVERSITY
Programme & Subject: M.Sc – Information Technology (Integrated)
Semester: III
Syllabus with Effect from: June-2013

Paper Code: PS03CIIT04	Total Credit: 3
Title Of Paper: Relational Database Management System - I	

Unit	Description in detail	Weightage (%)
I	<p>Introduction to 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</p>	25%
II	<p>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 Line Size, Set Page Size 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.</p>	25%
III	<p>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</p>	25%



IV	Query, Sub Query, Joins, Transaction Management And Reporting Through Sql*Plus Query And Sub Query, Types Of Sub Query 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 Overview Of Sql*Plus Report Building A Simple Report Reporting Commands – Remark, Setheadsep, Title, Btitle, Column, Breakon, Compute, Spool, Set Pause.	25%
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Basic Text & Reference Books:-

- An introduction to Database Systems : Bipin C. Desai, Galgotia Publications Pvt. Ltd.
- Ivan Bayross : SQL,PL/SQL The programming language of Oracle, 3rd revised edition, BPB Publications
- Kevin Loney, George Koch, Oralegi The Complete Reference , Oracle Press

Books For Additional Reading:

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

