SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25)
Syllabus with effect from the Academic Year 2021-2022

(Mater of Science in Quality and Productivity Management) (Master of Science)
(M. Sc.) (QPM) Semester (I)

Course Code	PS01CQPM52	Title of the Course	DATA BASE MANAGEMENT SYSTEMS
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	1. To Understand the Schema of creating Database
	2. To gain knowledge of different database system
	3. To obtain important of sharing database through different users
	4. To learn Data Guard system
	5. Apply knowledge of database design and developing a database management system.

Course Content		
Unit	Description	Weightage* (%)
1.	Introduction: File processing systems, data base systems and the evolution of database technology. Aims and importance of database technology, data independence, data sharing, data integrity, data redundancy control Data Modelling: Conceptual model, Logical Model, External model, Physical model	25
2.	INTRODUCTION TO ORACLE DBA: ;What is DBA ? Why a Company needs a DBA? Roles & Responsibilities of DBA Oracle Architecture D ATABASE CREATION Different Startup Modes Different Shutdown Modes Types of Database Creation Manual Method of Creation TABLESPACE MANAGEMENT Introduction to Table space Types of Table space(BIG & SMALL) STORAGE PARAMETERS What are segments? What are extents? Storage Parameters(Initial, Next, Min Extents, Xtents, Pctincrease)	25
3.	USER MANAGEMENT Who are Database Users? Why to create a User? Creation of Users Allocating table space Quotas to Users Levels of Authentication UNDO MANAGEMENT What is Undo? Why Undo required? Pending offline status Brief idea about Rollback segments Flashback Features	25

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	SPFILE & OMF What is spfile? Difference between spfile and pfile NETWORKING IN ORACLE Introduction to Oracle Networking Network default location Editing Network file	
4.	AVAILABILITY Introduction to Data Guard Types of Standby databases 11g New features in Data Guard RMAN Cloning Automatic Storage Management(ASM) SQL-LOADER Introduction to SQL Loader Types of files Control file AUDITING What is auditing? Why auditing performed? Types of Auditing Levels of Auditing FLASHBACK FEATURES: Flashback Database Flashback Archive(11g)	25
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Teaching-Learning Methodology	Interactive Class Lectures, ICT Tools (Pl/SQL), Case studies and Group Seminar.

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand relational data model in terms of data structure, data integrity, and data manipulation.
2.	Compute conceptual database models utilizing entity-relationship.
3.	Design data structures that will limit redundancy and enforce data integrity while conforming to organizational requirements utilizing normalization methodology.
4.	Interpret a given data model to query the database and transform the data into information using SQL (Structured Query Language).

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5.	Assess reports based on transactional data, including elements such as data groupings and summary values.
6.	Interpret the theory behind the relational data model as it applies to interactions with current database management systems.
7.	demonstrate the querying functions to successfully extract the data

Suggested References:

Sr. No.	References
1.	Arun K. Majumdar, Pritimoy Bhattacharya(1996) ,"Database Management Systems" Tata Mcgraw-Hill Publishing Company Limited, New Delhi.
2.	Ramez Elmasri (2008) "Fundamentals of Database Systtems" Dorling Kindersley(India) Pvt. Ltd.
3.	Das Gupta(2009), "Database Management System Oracle Sql And Pl/Sql" PHI Learning Pvt.Ltd.
4.	Ivan bayross(2009), "SQL, PL/SQL The Programming language of Oracle" BPB Publication, New Delhi.

On-line resources to be used if available as reference material
On-line Resources
RDBMS Tutorial. http://www.sql-tutorial.com/rdbms-and-database-tables-sql-tutorial/
Interactive Online SQL Training. https://www.sqlcourse.com/
Normalization. http://www.troubleshooters.com/littstip/ltnorm.html

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