

## ADVANCED DATABASE MANAGEMENT SYSTEM

Semester	Subject Code	Category	Lecture Hrs		Theory Hrs		Practical		Credits
			Per week	Per Sem	Per week	Per Sem	Per week	Per Sem	
II	21CPCS 2B	CORE - V	6	90	6	90	0	0	4

### COURSE OBJECTIVE

➤ This paper help us to gain the knowledge for creating the large Data Base and plays a major role for maintaining the Data Base.

### COURSE OUTCOME

successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	To learn the fundamentals of data models and to represent a database system using ER diagrams.	K3
CO2	To study SQL and relational database design.	K2
CO3	To understand the internal storage structures using different file and indexing techniques which will help in physical DB design	K3
CO4	To understand the fundamental concepts of transaction processing concurrency control techniques and recovery procedures.	K4
CO5	To have an introductory knowledge about the Data warehouse storage.	K4

*Knowledge Level – K1-Remember, K2- Understand, K3-Apply, K4-Analyze*

### MAPPING WITH PROGRAMME OUTCOME

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	M	S	S
CO2	M	S	S	S	S	M
CO3	S	S	S	M	S	S
CO4	S	M	S	M	S	M
CO5	S	M	S	M	S	M

*S-Strong, M-Medium and L-Low*

## **UNIT I – INTRODUCTION TO DBMS**

**17 Hours**

Advantages and components of a database management systems - Feasibility Study - Class Diagrams - Data Types - Events - Normal Forms - Integrity - Converting Class Diagrams to Normalized tables - Data Dictionary.

## **UNIT II – BASICS OF SQL QUERIES**

**19 Hours**

Query Basics - Computation using queries - Subtotals and GROUP BY commands - Queries with Multiple tables - Sub queries - Joins - DDL & DML - Testing Queries.

## **UNIT III – FORMS AND REPORTS**

**18 Hours**

Effective Design of forms and reports - Form Layout - Creating Forms - Graphical Objects - Reports - Procedural Languages - Data on Forms - Programs to Retrieve and save Data - Error handling.

## **UNIT IV – APPLICATION AND ITS OPERATIONS**

**17 Hours**

Power of application structure - User Interface Features - Transactions - Forms Events - Custom reports - Distributing Applications - Table Operations - Data Storage methods - Storing Data Columns - Data Clustering and partitioning.

## **UNIT V – DATABASE ADMINISTRATION**

**19 Hours**

Database Administration - Development Stages - Application types - backup and recovery - Security and Privacy - Distributed databases - Client/Server Databases - Web as a Client/Server System - Object Oriented Databases - Integrated Applications.

### **Practical For Classes :**

1. Individual project development was done.

**Distribution of Marks: Theory 70% and Problem 30%**

### TEXT BOOKS

S. NO	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1	Gerald V. Post	Database management Systems-- Designing and building Business Applications	Mc Graw hill International Edition	1999

### REFERENCEBOOKS

S. NO	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1	Abraham Silberschatz  Henry F. Korth and S. Sudarshan	Database System Concepts	McGraw-Hill	2006.
2	Raghu Ramakrishnan	Database management Systems	WCB / Mc Graw Hill	1998

### WEB RESOURCES

1. <https://www.tutorialspoint.com/dbms/>
2. <https://www.w3schools.in/dbms/>

### TEACHING METHODOLOGY

- Class room teaching & Group discussions
- Seminars & Smart Class room
- Chart/Assignment & Simulation Model

### SYLLABUS DESIGNERS

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