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	
IV		Core (Theory-10)	5	75	5	75	0	0	4

COURSE OBJECTIVE

- This course aims at facilitating the student to understand the various functionalities of DBMS software and perform many operations related to creating, manipulating and maintaining databases for Real-world applications
- Student to understand the various designing concepts, storage methods, querying and managing databases.

COURSE OUTCOME

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Explain the purpose , structure and model of the relational database system.	**K1,K2**
CO2	Familiarize with Relational algebra and calculus.	**K3**
CO3	Understand the basics of structured query language.	**K2 & K3**
CO4	Design a database based on a data model considering the normalization to a specified level.	**K3**
CO5	Explain the basics of oracle and pl/sql	**K2& K3**

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

MAPPING WITH PROGRAMME OUTCOME

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

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

SYLLABUS

UNIT I **16 hrs**

Purpose of Database - Overall System Structure - Entity Relationship Model -Mapping Constraints - Keys - E-R Diagrams.

UNIT II **16 hrs**

Relational Model - Structure - Formal Query Language - Relational Algebra - Tuple and Domain Relational Calculus.

UNIT III **12 hrs**

Structured Query Language - Basic Structure - Set Operations - Aggregate Functions - Date, Numeric and Character Functions - Nested Sub queries -Modification Of Databases Joined Relations- DDL - Embedded SQL.

UNIT IV **15 hrs**

Relational Database Design - Pitfalls - Normalisation Using Functional Dependencies - First Normal Form-Second Normal

Form-Third Normal Form-Fourth Normal Form And BCNF.

UNIT V **16 hrs**

Oracle - Introduction – SQL(DDL,DML, DCL Commands) – Integrity Constraints – PL/SQL – PL/SQL Block – procedure, function – Cursor management – Trigger – Exception Handling.

Distribution of Marks: Theory : 70% and Problems: 30%

TEXT BOOKS

S. No	Authors	Title	Publishers	Year of Publication
1	Singh	Database systems: Concepts, Design & applications	Pearson Education	-
2	Abraham Silberschartz, H.F. Korth and S.Sudarshan	Database System Concepts	McGraw Hill Publication.	-

REFERENCE BOOKS

S. No	Authors	Title	Publishers	Year of Publication
1.	Gerald V.Post	DBMS-Designing and Business Applications	McGraw Hill Publications.	2005
2.	Deitel and Deitel	VB6 How TO Program,	Person Education	1998
3.	Raghu Ramakrishnan	Database Management Systems	McGraw Hill Publications	
4.	J D Ullman	Principles of Database Systems	Computer science press	1993

5.	R Elmasri and S Navathe	Fundamentals of Database Systems	Pearson Education	2006
6.	P S Gill	Database Management Systems	I K international publishing	2011
7.	CONNOLLY	Database Systems : A Practical Approach to Design, Implementation and Management	Pearson Education	2015
8.	Kahate	Introduction to Database Management Systems	Pearson Education	2006

WEB RESOURCES

https://www.capterra.com/database-management-software/

TEACHING METHODOLOGY

- Class room teaching.
- Group discussions
- Seminars
- Demo using systems
- Chart/Assignment
- Simulation Model
- Smart Class room

SYLLABUS DESIGNER

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