

I Year II Semester

Code		Marks	L	T	P	C
25MB2004	DATA BASE MANAGEMENT SYSTEM	100	3	0	0	3
Open Elective						

UNIT- I

Introduction to Database Systems: Data - Database Applications - Evolution of Database - Need for Data base Management – Data models - Database Architecture - Key Issues and Challenges in Database Systems.

UNIT -II

ER and Relational Models: ER Models – ER to Relational Mapping –Object Relational Mapping - Relational Model Constraints - Keys - Dependencies - Relational Algebra - Normalization - First, Second, Third & Fourth Normal Forms - BCNF – Join Dependencies.

UNIT- III

Data Definition and Querying: Basic DDL - Introduction to SQL - Data Constraints - Advanced SQL – Views - Triggers - Database Security – Embedded & Dynamic SQL.

UNIT -IV

Transactions and Concurrency: Introduction to Transactions - Transaction Systems - ACID Properties - System & Media Recovery - Need for Concurrency - Locking Protocols – SQL for Concurrency – Log Based Recovery - Two Phase Commit Protocol - Recovery with SQL- Deadlocks & Managing Deadlocks.

UNIT -V

Advanced Topics in Databases: Indexing & Hashing Techniques - Query Processing & Optimization - Sorting & Joins – Database Tuning - Introduction to Special Topics - Spatial & Temporal Databases – Data Mining and Warehousing.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:

1. Abraham Silberschatz, Henry F. Korth, S. Sudharshan, —Database System ConceptsI, Sixth Edition, TataMcGraw Hill, 2010.
2. Ramez Elmasri, Shamkant B. Navathe, —Fundamentals of Database SystemsI, Sixth Edition, Pearson/Addison - Wesley, 2010.
3. C.J. Date, A. Kannan and S. Swamynathan, —An Introduction to Database SystemsI, Pearson Education, Eighth Edition, 2006.
4. Raghu Ramakrishnan, —Database Management SystemsI, Fourth Edition, McGraw Hill, 2015.

Signed by:

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