

AIML	DATABASE MANAGEMENT SYSTEMS	3	0	0	3
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Course Objectives

- To help the learner to understand the concepts, techniques, security features, how data is stored in the system, Query Languages used and different types of Statements used in the Query Processing in Database Management Systems.

UNIT I INTRODUCTION 9

Database system application-Purpose of database system-View of data-Database language-Relational database-Data storage and queuing-Transaction management-Database architecture-Database users and administrators-History of database system

UNIT II INTRODUCTION TO SQL 9

SQL Data Definition and its types – Specifying Constraints in SQL – Basic Retrieval Queries in SQL – INSERT,UPDATE ,DELETE Statements in SQL – Aggregate Functions in SQL – GROUPING : The GROUP BY and HAVING Clause – JOIN Expressions - VIEWS - TRANSACTIONS – SUBQUERIES

UNIT III DATABASE DESIGN& PROGRAMMING TECHNIQUES 9

Functional Dependencies – First, Second, Third Normal Forms, Dependency Preservation – Boyce/Codd Normal Form–Multi-valued Dependencies and Fourth Normal Form – Join Dependencies and Fifth Normal Form– Entity relationship Model –Entity relationship Diagram and Examples

UNIT IV TRANSACTION MANAGEMENT AND DATABASE SECURITY 9

Transaction - Simple Transaction Model – Serialz ability- Lock based protocols-Time stamp based protocol-Deadlock handling- Two Phase Commit – Introduction to Database Security Issues – Access Control Based on Granting and Revoking Privileges – Challenges of Database Security

UNIT V DATA STORAGE AND QUERYING 9

Overview of Physical storage Media - Magnetic disks - RAID-Tertiary storage – File organization- Organization of records in files- B+ - tree index files - B-tree Index files- Static Hashing- Dynamic Hashing -Overview of query processing-CASE STUDY-ORACLE

TOTAL : 45 hours

Text Books:

- T3: Abraham Silberschatz, Henry F.korthS.Sudharshan, "Database system concepts" sixth edition,tata mcgraw hill 2010.
- T4: Ramez Elmasri, Shamkant B. Navathe, "Fundamentals of Database Systems", FourthEdition , Pearson / Addision wesley, fifth edition, 2009.