



Synergy School of Engineering, Dhenkanal

Lesson Plan

Subject-DATABASE MANAGEMENT SYSTEMS	Branch - CSE	Semester-4 th Session- 2025-26
Name of the Faculty- ASMITA PRANAYANI	No. of Days/week-03	Start Date: 22/12/25 End Date:18/04/26

Week	Class	Topic
1	1st	Introduction to DBMS: Definition, Need & Applications
	2nd	Database vs File System
	3rd	DBMS Architecture & Components
2	1st	Views of Data
	2nd	Data Models: Hierarchical & Network
	3rd	Relational Data Model
3	1st	Introduction to RDBMS
	2nd	Advantages & Disadvantages of DBMS
	3rd	Revision - Unit I
4	1st	Introduction to ER Model
	2nd	Entities, Attributes & Relationships
	3rd	Constraints in ER Model
5	1st	Keys: Primary, Candidate, Super Keys
	2nd	Foreign Keys & Relationships
	3rd	ER Diagrams - Components
6	1st	ER Diagram Examples
	2nd	ER to Relational Mapping
	3rd	Revision - Unit II
7	1st	Relational Algebra: Selection & Projection
	2nd	Cartesian Product & Joins
	3rd	Thread Models

8	1st	SQL Basics: DDL Commands
	2nd	DML Commands
	3rd	Create, Alter, Drop
9	1st	Insert, Update, Delete
	2nd	Filtering & Sorting
	3rd	Aggregate Functions & GROUP BY
10	1st	Joins: Inner & Outer
	2nd	Left, Right & Cross Joins
	3rd	Revision - Unit III
11	1st	Database Design Concepts
	2nd	Data Redundancy & Anomalies
	3rd	Functional Dependencies
12	1st	Normalization: 1NF
	2nd	2NF & 3NF
	3rd	BCNF & Decomposition
13	1st	Transactions & ACID Properties
	2nd	Transaction States & Schedules
	3rd	Serializability & Recoverability
14	1st	Concurrency Control & Locking
	2nd	Deadlocks & Timestamp Ordering
	3rd	Revision - Unit V
15	1st	User Management & Privileges
	2nd	Backup, Recovery & Security
	3rd	Authentication, Authorization & Revision

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20/12/25

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Verified By:
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