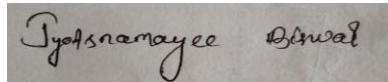# PNS SCHOOL OF ENGINEERING & TECHNOLOGY
Lesson Plan of Summer 2026

Department : CSE	Semester : 4th	Name of the Faculty : Er Jyotsnamayee Biswal	
Subject: Database Management System	No.of days/per week class allotted 5p/week.	Semester from : 22/12/2025 to 18/04/2026	
		No. of weeks:12 weeks	
		Topics to be covered:	
1st week	1st	Definition, Need & Applications of DBMS	
	2nd	Database vs File System	
	3rd	DBMS Architecture & Components	
	4th	Views of Data & Data Models	
	5th	RDBMS, Advantages & Disadvantages + Assignment	
2nd week	1st	unit-2 Introduction to ER Model	
	2nd	Entities & Attributes	
	3rd	Relationships & Constraints	
	4th	Keys (PK, FK, Candidate, Super)	
	5th	ER Diagrams	
3rd week	1st	ER Diagram Practice	
	2nd	Complex ER Diagrams	
	3rd	ER to Relational Mapping	
	4th	Mapping Weak Entities	
	5th	Assignment + class Test +doubt clearing class	
4th week	1st	Unit-3 Relational Algebra Basics	
	2nd	Selection & Projection	
	3rd	Set Operations	
	4th	Cartesian Product	
	5th	Join Operations	
5th week	1st	SQL Introduction	
	2nd	DDL Commands	
	3rd	DML Commands	
	4th	Aggregate Functions	
	5th	Group By & Having	

Week	Session	Topic
6th week	1st	Join Queries
	2nd	Nested Queries
	3rd	Views & Indexes
	4th	Advanced SQL Practice
	5th	Unit-3 Assessment + class test
7th week	1st	Unit-4 Database Design Concepts
	2nd	Data Redundancy & Anomalies
	3rd	Functional Dependencies
	4th	Normalization – 1NF & 2NF
	5th	Normalization – 3NF
8th week	1st	BCNF
	2nd	Decomposition of Relations
	3rd	Normalization Problems
	4th	Case Study
	5th	Unit-4 Test + assignment
9th week	1st	Unit-5 Transactions & ACID
	2nd	Transaction States
	3rd	Schedules
	4th	Serializability
	5th	Recoverability
10th week	1st	Concurrency Control
	2nd	Locks & Lock Types
	3rd	Deadlocks
	4th	Timestamp Ordering
	5th	Unit-5 Assignment
11th week	1st	Unit-6 User Management
	2nd	Privileges & Roles
	3rd	Backup & Recovery
	4th	Database Security
	5th	Authentication & Authorization
	1st	Data Encryption
	2nd	Security Case Studies

12th week	3rd	Admin Tools Practice
	4th	Revision
	5th	Doubt clearing class

Signature of Lecturer

Signature Of H.O.D