

NM Institute Of Engineering and Technology, Bhubaneswar

DEPARTMENT:CSE

LESSON PLAN: Academic Year 2022-23 (Even Semester) COURSE: DIPLOMA SEM: 4TH

Subject/Code: DATABASE MANAGMENT SYSTEM Faculty Name: Mr. AMBUJA KU PARIDA


SL. NO.	Name of the Topic to Cover	Text Book	Teaching Method	Course Progress	Remark
1	Introduction to database Systems	T1	G	100%	
2	advantages of database system over traditional file system	T1	G	100%	
3	Basic concepts & Definitions	T1	G	100%	
4	Database users, Database Language	T1	G	100%	
5	Database System Architecture	T2	G	99%	
6	Schemas, Sub Schemas	T2	G	100%	
7	Instances, database constraints	T1	G	100%	
8	3-level database architecture	T3	G	100%	
9	Data Independence	T4	G	98%	
10	Data Abstraction	T1	P	100%	
11	Mappings	T1	P	99%	
12	Structure of database	T1	P	100%	
13	Components & functions of DBMS, Data models.	T1	G	100%	
14	Entity relationship mode	T3	G	100%	
15	Components of ER model,	T2	P	100%	
16	Mapping E-R model to Relational schema	T1	P	100%	
17	Network and Object Oriented Data models	T1	G/P	100%	
18	Storage Strategies: Detailed Storage Architecture, Storing Data	T2	P	100%	
19	Other Disks, Magnetic Tape	T1	P	100%	
20	Magnetic Disk, RAID	T2	G	100%	
21	Storage Access	T2	G	100%	
22	File & Record Organization	T2	P	100%	
23	File Organizations & Indexes, Order Indices	T2	G	99%	
24	B+ Tree Index Files	T3	P	100%	
25	Hashing Data Dictionary	T3	G	100%	
26	Relational Algebra, Tuple	T2	P	100%	
27	Domain Relational Calculus	T3	G	100%	
28	Relational Query Languages: SQL and QBE	T2	G	99%	
29	Database Design :-Database development life cycle (DDLC)	T2	G	100%	
30	Functional dependency	T2	G	100%	
31	Decomposition	T2	G	100%	
32	Automated design tools	T3	G	100%	
33	Join strategies	T3	G	100%	
34	Dependency Preservation	T4	G	99%	
35	lossless Design	T3	G	100%	
36	Normalization	T3	P	100%	
37	Normal forms:1NF, 2NF	T2	G	98%	
38	Normal forms:3NF, and BCNF	T3	G	100%	
39	Multi-valued Dependencies, 4NF & 5NF	T4	G	100%	
40	Query processing and optimization	T4	P	99%	

41	Evaluation of Relational	T4	P	100%	
42	Algebra Expressions	T2	G	100%	
43	Query optimization	T2	G	99%	
44	Query cost estimation.	T2	G	99%	
45	Transaction processing and concurrency control	T2	P	97%	
46	Transaction concepts	T2	G	100%	
47	properties of transaction, concurrency control	T2	G	100%	
48	Timestamp methods for concurrency control schemes	T2	P	100%	
49	locking and Timestamp methods for concurrency control schemes	T2	P	99%	
50	Database Recovery System	T2	G	97%	
51	Types of Data Base failure	T2	P	100%	
52	Types of Database Recovery	T2	P	100%	
53	Recovery techniques.	T2	G	99%	
54	Fundamental concepts on Object-Oriented Database	T3	G	100%	
55	Object relational database	T3	G	97%	
56	distributed database	T3	P	99%	
57	Parallel Database	T2	G	98%	
58	Data warehousing	T2	G	100%	
59	Data Mining	T2	G	100%	
60	Big data and NoSQL.	T3	P	100%	

Method of Teaching

G: Green Board Teaching

P: Power Point Teaching

Faculty Signature 

After completion of this course the student will be able to:

Understand the database concepts, their benefits and advantages

Understand the Database architecture

Understand the concepts of E-R diagrams & E-R modeling

Understand relational algebra

Comprehend the different aspects of SQL

Understand the concepts of normalization

Understand the concepts of transaction processing

Understand the techniques of concurrency control

Text Books:

T1-Database System Concepts by Rog.Cornel. Cengage Learning

T2-Data Base System Prateek Bhatia, Kalyani Publications

T3-Database System Concepts by A. Silberschatz, H.F. Korth. TMH Publication

T4-An Introduction to Database Systems by C.J. Date Norosa Publication

Digital Learning Resources:

https://www.youtube.com/watch?v=kBdIM6hNDAE&list=PLxCzCOWd7aiFAN6I8CuViBuCdJgiO&T2Yhttps://www.youtube.com/watch?v=yDEJxYGAos0&list=PLbRMhDVUMngdCkMipemSKP_dCgZLLIOe8