



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN  
(AUTONOMOUS)



DEPARTMENT OF INFORMATION TECHNOLOGY

Course Code / Name: U15IT301 / DATABASE MANAGEMENT SYSTEMS

Class (Year / Programme / Department / Section) : II/B.TECH/IT

**LESSON PLAN**

UNIT I ( INTRODUCTION)				
Session No	Topic	Duration In Minutes	Teaching Aid	Book Referred
1	INTRODUCTION	45	BB&PPT	R1
2	Purpose of Database System	45	BB&PPT	R1
3	View of Data	45	BB&PPT	R1
4	Data Models	45	BB&PPT	R1
5	Database Languages	45	BB&PPT	R1
6	Database System Architecture	45	BB&PPT	R1
7	Database users and Administrator	45	BB&PPT	R1
8	Entity–Relationship model (E-R model )	45	BB&PPT	R1
9	E-R Diagrams	45	BB&PPT	R1
10	Introduction to relational databases.	45	BB&PPT	R1
UNIT II (RELATIONAL MODEL)				
1	The relational Model	45	BB&PPT	R1,R2
2	The catalog- Types, Keys	45	BB&PPT	R1,R2
3	Relational Algebra	45	BB&PPT	R1,R2
4	Domain Relational Calculus	45	BB&PPT	R1,R2

5	Tuple Relational Calculus	45	BB&PPT	R1,R2
6	Fundamental operations	45	BB&PPT	R1,R2
7	Additional Operations	45	BB&PPT	R1,R2
8	SQL fundamentals	45	BB&PPT	R1,R2
9	Integrity, Triggers, Security	45	BB&PPT	R1,R2
10	Advanced SQL features, Embedded SQL, Dynamic SQL	45	BB&PPT	R1,R2
11	Missing Information, Views	45	BB&PPT	R1,R2
12	Introduction to Distributed Databases and Client/Server Databases	45	BB&PPT	R1,R2
<b>UNIT III (DATABASE DESIGN)</b>				
1	Functional Dependencies	45	BB&PPT	R1,R2
2	Non-loss Decomposition	45	BB&PPT	R1,R2
3	Functional Dependencies	45	BB&PPT	R1,R2
4	First, Second, Third Normal Forms	45	BB&PPT	R1,R2
5	Dependency Preservation	45	BB&PPT	R1,R2
6	Boyce/Codd Normal Form-Multi-valued Dependencies and Fourth Normal Form	45	BB&PPT	R1,R2
7	Join Dependencies and Fifth Normal Form	45	BB&PPT	R1,R2
<b>UNIT IV (TRANSACTIONS)</b>				
1	Transaction Concepts	45	BB&PPT	R1,R2
2	Transaction Recovery	45	BB&PPT	R1,R2
3	ACID Properties	45	BB&PPT	R1,R2
4	System Recovery –Media Recovery	45	BB&PPT	R1,R2
5	Two Phase Commit, Save Points	45	BB&PPT	R1,R2
6	SQL Facilities for recovery	45	BB&PPT	R1,R2
7	Concurrency – Need for Concurrency	45	BB&PPT	R1,R2
8	Locking Protocols, Intent Locking	45	BB&PPT	R1,R2

9	Deadlock-	45	BB&PPT	R1,R2
10	Serializability	45	BB&PPT	R1,R2
11	Recovery Isolation Levels	45	BB&PPT	R1,R2
12	SQL Facilities for Concurrency	45	BB&PPT	R1,R2
<b>UNIT IV (IMPLEMENTATION TECHNIQUES)</b>				
1	Overview of Physical Storage Media	45	BB&PPT	R1,R2
2	Magnetic Disks, RAID	45	BB&PPT	R1,R2
3	Tertiary storage, File Organization	45	BB&PPT	R1,R2
4	Organization of Records in Files	45	BB&PPT	R1,R2
5	Indexing and Hashing	45	BB&PPT	R1,R2
6	Ordered Indices	45	BB&PPT	R1,R2
7	B+ tree Index Files, – B tree Index Files	45	BB&PPT	R1,R2
8	Static Hashing – Dynamic Hashing	45	BB&PPT	R1,R2
9	Query Processing Overview	45	BB&PPT	R1,R2
10	Catalog Information for Cost Estimation	45	BB&PPT	R1,R2
11	Selection Operation	45	BB&PPT	R1,R2
12	Sorting, Join Operation, Database Tuning	45	BB&PPT	R1,R2