

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Information Technology

Lesson plan of faculty member for the academic year 2019–20

Class: II B Tech

Branch-Section: IT-B

Semester: II

Subject: Database Management Systems

Lectures per week: 4

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Introduction		
1	Introduction of DBMS, Database System Applications	17 December 2019
2	A Historical perspective	18 December 2019
3	File Systems versus a DBMS	20 December 2019
4	The Data Model	21 December 2019
5	Levels of Abstraction in a DBMS	24 December 2019
6	Data Independence	27 December 2019
7	Structure of a DBMS	28 December 2019
8	Introduction to Database Design	31 December 2019
9	Database design and ER Diagrams	3 January 2020
10	Entities, Attributes and Entity Sets	4 January 2020
11	Relationships and Relationship sets, Additional features of E-R Model.	7 January 2020
12	Conceptual Design with E-R Model	8 January 2020
UNIT-II: Relational Model		
13	Introduction to Relational Model	10 January 2020
14	Integrity Constraints over the Relations	11 January 2020
15	Enforcing Integrity Constraints	17 January 2020
16	Querying relational data	18 January 2020
17	Logical database design	21 January 2020
18	Introduction to views	22 January 2020
19	Destroying/altering tables and views	24 January 2020
20	Introduction to Relational Algebra	25 January 2020
21	Tuple Relational Calculus	28 January 2020
22	Domain relational Calculus	29 January 2020
UNIT-III: SQL Queries, Constraints, Triggers		
23	Form of basic SQL query	31 January 2020
24	Union, Intersect and Except	1 February 2020
25	Nested Queries	4 February 2020
26	Aggregation operators	5 February 2020
27	NULL Values	7 February 2020
28	Complex Integrity Constraints in SQL	8 February 2020
29	Triggers and active Databases	11 February 2020
30	Designing Active DB	12 February 2020
31	Introduction to Schema Refinement	14 February 2020
32	Problems caused by redundancy, decompositions	15 February 2020
33	Problems related to decompositions	18 February 2020
34	Reasoning about functional dependencies	19 February 2020
35	First, Second and Third Normal Forms, BCNF	22 February 2020
36	Lossless join decomposition	25 February 2020
37	Multi-valued dependencies	26 February 2020
38	Fourth normal form	28 February 2020
39	Fifth normal form	29 February 2020
UNIT-IV: Transaction Management		
40	Introduction to Transaction Concept, Transaction state	3 March 2020
41	Implementation of Atomicity and Durability	4 March 2020
42	Concurrent Executions	6 March 2020

43	Serializability, Recoverability	7 March 2020
44	Implementation of Isolation	10 March 2020
45	Testing of Serializability	11 March 2020
46	Lock based Protocols	12 March 2020
47	Timestamp based protocols, Validation- based protocols	13 March 2020
48	Multiple Granularity	14 March 2020
49	Recovery and Atomicity, Log-Based Recovery	17 March 2020
50	Recovery with Concurrent Transactions	18 March 2020
UNIT-V: Overview of Storage and Indexing		
51	Data on External Storage, File Organization and Indexing	20 March 2020
52	Cluster Indexes, Primary and Secondary Indexes	21 March 2020
53	Index Data Structures, Hash based, and Tree based Indexing	24 March 2020
54	Comparison of File Organizations	27 March 2020
55	Indexes and Performance Tuning	28 March 2020
56	Examples on indexing	31 March 2020
57	Intuitions for tree Indexes	1 April 2020
58	Indexed Sequential Access Methods (ISAM)	3 April 2020
59	B+ Tree: A Dynamic Index Structure	4 April 2020

Text Books:

1. Database management systems, Raghu Ramakrishnan, Johannes Gehrke, TMH 3rd Edition.
2. Database System Concepts, A Silberschatz, H.F.Korth, S. Sudarshan, McGraw hill V edition.

Name and signature of the faculty: Siva Kumar S -----

Name and signature of Head of the Department: Vinod M -----