Lesson Plan

Name of Faculty : Dr. Sanjay Dahiya, Assistant Professor of CSE
Discipline : Computer Science and Engineering
Semester : IVth (Even)
Subject : Database Management Systems (CSE-202 L)
Lesson Plan Duration : 15 weeks (from January/ February-2018 to April/ May-2018)
Work Load (Lecture/Practical) per week (in hours): Lectures-04 hours

Week	Theory		Practical (Group-I/II)	
	Lecture Day	Topic (Including Assignment/Test)	Practical Day	Topics/ Programs
1st	1	Overview of database and DBMS	NA	NA
	2	File System Vs DBMS		
	3	Characteristics of Database approach		
	4	User of Database		
2nd	5	Advantages and Disadvantages of DBMS over file processing systems		
	6	Responsibility of Database Administrator		
	7	Database System Concept and Architecture		
	8	Data Models (Network, Hierarchical & Relational Model)		
3rd	9	Schemas and Instances , Database language		
	10	DBMS architecture, Three levels architecture of Database Systems		
	11	Various views of data and data Independence		
	12	ER Model, Entity Types, Attributes and Keys		
4th	13	Relationships , Roles and Structural Constraints		
	14	ER Diagram and Examples		
	15	Reduction of E-R diagram into tables		
	16	Relational Model		
5th	17	Relational Algebra & various operations		
	18	Relational Algebra & various operations		
	19	Relational and Tuple calculus		
	20	Relational and Tuple calculus		
6th	21	Network, Hierarchical & Relational Model		
	22	Problems on Relational Algebra		
	23	Problems on Relational calculus		
	24	Problems on Design of ER models		
7th		**1st Minor Test**		
8th	25	Introduction to Query Languages (SQL)		
	26	Data Definition and Constraints		
	27	Insertion in SQL		
	28	Deletion and Update in SQL		
9th	29	Queries in SQL		
	30	Relational Database Design		
	31	Functional dependencies : Full, Partial, Transitive		
	32	Introduction to Normalisation (Decomposition and Integrity Constraints)		
10th	33	First and second Normal forms		
	34	Third Normal forms and BCNF		
	35	Fourth Normal forms		
	36	Problems on Normalisation		

11th	37	DDBMS Design		
	38	Replication and Techniques		
	39	Replication Techniques		
	40	Problem Solution on Replication Techniques		
12th	41	Introduction to Concurrency control techniques		
	42	ACID Properties of a transaction		
	43	Locking Techniques		
	44	Problem Solution on Locking Techniques		
13th	45	Time Stamp Ordering		
	46	Multi Version Techniques		
	47	Deadlock and Necessary Conditions		
	48	Problems and Solutions		
14th		**2nd Minor Test**		
15th	49	Introduction to Recovery systems and Techniques		
	50	Recovery Techniques in Centralized DBMS		
	51	Recovery Techniques in Centralized DBMS		
	52	Problem Solution		

Dr. Sanjay Dahiya,
Assistant Professor of CSE