WEEK WISE BREAK UP OF SUBJECT SYLLABUS

Subject: **Relational Database Management System SBTE Code: 263   Technology: CIT**

Theory

WEEK #	SUBJECT TOPICS / SUBDIVISION
1	Introduction to Subject and course outline, related Books and website.
2	Introducing the Database Management System Field Definitions and Naming Conventions Components of DB Applications DB Tools; Microsoft Access, MySQL
3	Database System Legacy DB Systems File Processing Systems
4	Database Models Hierarchical Model Network Model
5	Database Models Semantic Data Model Relational Model
6	Database Models and the Internet
7	Relational Database Management Systems A logical view of Data; Entities and Attributes Tables and their Characteristics, Keys
8	Integrity rules Entity and referential integrity Relational Database operators
9	Normalization of Database Tables Need for Normalization Conversion to First Normal Form
10	Conversion to Second Normal Form Conversion to Third Normal Form Boyce-Cod Normal Form (BCNF)
11	Relational Algebra and SQL Unary and Binary operations

12	Cartesian Product Set Operations SQL Operators
13	Relational Algebra and SQL Introduction to DDL Aggregate Function in SQL, Grouping Data
14	Relational Algebra and SQL Introduction to DML
15	Aggregate Function in SQL, Grouping Data
16	Data Control Language
17	Database Life Cycle (DBLC) Database Initial Study Database Design
18	Database Design Strategies Centralized versus Decentralized Design
19	Entity Relationship (E-R) Modeling Basic Modeling Concepts
20	Degrees of Data Abstraction Association and Cardinality
21	Relationship Participation Composite Entities, Entity Super types and subtypes Enhanced Entity Relationship Diagram
22	Transform ER/EER to Relational Model
23	Transaction Management What is a Transaction?
24	Evaluating Transaction Results Transaction Management with SQL Transaction Log, Transaction Types
25	Revision
26	26 week Revision to 32

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Practical List

WEEK #	SUBJECT TOPICS / SUBDIVISION
1	Introduction to Microsoft Access Installation and basic usage
2	Introduction to MySQL database management system Installation and basic usage
3	Create Database Create Table, Data types, DML (insert, delete, update) operations Concept of primary key
4	Simple Select Statement Select and Project operations Where clause
5	Operators (Arithmetic, Logical, Concatenation) Null value in Expressions Between, In , Like operators ,Column Alias Sorting (order by clause) ,Single Row Functions
6	Group functions Group By, Having Clause Joins & Types
7	Database Concepts DDL and DML Transactions
8	Database Connectivity with MySQL
9	More than One table Concept of join and foreign key, Referential Integrity Cascade update and Cascade delete operations Master-Details tables and DML
10	Concept of QBE (Query by Example) grid in MS Access Writing Queries using QBE Aggregate functions Datasheet, SQL and design view
11	Database Connectivity(Login Problem) Save, Retrieve, Update using PHP & MySQL Data movement between page navigation
12	User Level Security and Access Rights Relational Modeling using Erwin