

# INDEX

## UNIT I

**Syllabus :** Concept of Data, Database, DBMS, Advantages of DBMS over File Processing System, Application of database. Three Level Architecture for Database System. Data Abstraction : Different Levels of Data Abstraction, Instance and Schema, Data Independence - Logical and Physical Independence. Overall structure of DBMS. Data Modeling : Record Based Logical Model-Relational, Network, Hierarchical. Data modeling using the E-R Model : Entity Relationship Model, Strong Entity Set, Weak Entity Set, Types of Attributes, E-R Diagrams

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## UNIT II

**Syllabus :** Fundamentals of RDBMS - Record, fields, Data types, tables and database, Concept of RDBMS, E.F Codd's rule for RDBMS, Key concepts - Candidate key, Primary key, Foreign key. Normalization : Normalization Concepts, Need of Normalization, Types of Normalization - 1NF, 2NF, 3NF. Introduction to Structure Query Language, Data Types in SQL, Components of SQL : DDL, DML, DCL, DQL. DDL Commands: CREATE, ALTER, DROP, TRUNCATE, DESC, RENAME. Data Integrity Constraint : Types of Data Integrity Constraint : IO Constraint - Primary Key, Foreign Key, Unique Key Constraint , Business Rule Constraint : Null, Not Null and Check Constraint. DML Commands : INSERT, UPDATE, DELETE. DCL commands : COMMIT, SAVEPOINT, ROLLBACK, GRANT AND REVOKE. DQL Commands : SELECT. SQL Operators : Arithmetic Operators, Comparison Operators, Logical Operators, Set Operators, Range Searching Operators - Between, Pattern Matching operators - Like

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### UNIT III

**Syllabus :** In-built Functions : String, Arithmetic, Date and Time, Aggregate Functions, Queries Using Group By, Having and Order by Clause, Joins – Inner and Outer Joins, Sub Queries. Views : Concept of View, The create view command, updating views, views and joins, views and sub-queries, Dropping views. Sequences : Creating Sequences, Altering Sequences, Dropping Sequences. Indexes : Index Types, Creating of an Index - simple, unique and Composite Index, Dropping Indexes. Synonyms : Creating Synonyms, Dropping Synonyms

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