

MIT(CS)-402

Introduction to DBMS

Block-1

UNIT-1

Introduction Database management system, Characteristics and Benefits of a Database management system, Merits and Demerits of DBMS , Database Architecture , Traditional file systems, View of data, Database language , Data Dictionary , Types of DBMS , Centralized DBMS , Parallel DBMS ,Distributed DBMS ,Client-Server , Relational databases , Database Design , Database Administrator

Unit-2

Introduction to Data Model , Need for Data Model ,Types of Data Model , Object Based Data Models, Physical Data Models , Record Based Data Models , Hierarchical Model, Network Model , Relational Model ,ER Model, Entity, Entity Set and Entity Type, Types of Attributes, Relationships and its type

Unit-3

Relational data model, Properties of a Table, Relation, Tuple, Attribute, Cardinality, Degree, Domain, Databases with multiple relations

Block-2

Unit-1

Introduction to SQL, Characteristic of SQL, Basic Structure of SQL Queries, Basic Data Types ,SQL Commands ,Useful Relational Operator , Aggregate Functions , SUM function, AVG Function

Unit-2

manipulate the data in the database tables, Compound Conditions and Logical Operators ,AND Operator ,OR Operator ,Combining AND and OR Operators ,IN Operator ,BETWEEN Operator ,NOT Operator ,Order of Precedence for Logical Operators ,LIKE Operator ,Concatenation Operator , Handling NULL Values

Unit-3

Introduction to Normalization and Its Objectives ,Normal Forms ,First Normal Form (1NF) ,Second Normal Form (2NF) ,Third Normal Form (3NF) ,Boyce-Codd Normal Form (BCNF) ,Fourth Normal Form (4NF) ,Fifth Normal Form (5NF)

Block-3

Unit-1

Introduction to Keys , Types of Keys , Super Key , Candidate Key , Primary Key , Alternate Key ,Composite Key ,Foreign Key

Unit-2

Back up of Database ,SQL Server Backup – Scopes and Types ,Backup Scopes ,Backup Types ,Back Up Tools ,Types of Database Failure ,Types of Database Recovery ,Developing a Backup and Recovery Strategy ,General Types of Recovery ,Structure of Recovery ,Recoverable Database Backup Operations ,Automated Backup Operations ,Database Security

Unit-3

Introduction to Model Concept ,Relational Schema and Instances, Integrity Constraints ,Entity Integrity Constraints ,Referential Integrity Constraints ,Domain Constraints ,The CODD Commandments