

Complete Notes On

Data Base
Management System

Index

Sr. No.	chapter Name	Page No.
1.	Introduction to databases 1.1 Basic concepts of databases 1.2 Database management system architecture 1.3 Data Models 1.4 Advantages and disadvantages of using databases.	5 - 11
2.	Entity- Relationship (ER) model 2.1 Entities, attributes and relationships 2.2 Entity-Relationship diagrams (ERDs) 2.3 Cardinality and participation constraints 2.4 keys in ER model	12 - 22
3.	Relational data Model 3.1 Relational schema 3.2 Relational Algebra 3.3 Tuple and domain relational calculus 3.4 SQL basics	23 - 26
4.	Normalization 4.1 Functional dependencies 4.2 First, second and Third Normal Forms	27 - 31

Sr.No

chapter Name

Page

4.3 Boyce-Codd Normal Forms

4.4 Multivalued dependencies

5.

Query optimization and Execution

5.1 Query processing and parsing

5.2 Query optimization techniques

5.3 Indexing and hashing

5.4 Execution plans and cost estimation

32 - 3

6.

Transaction and concurrency control

6.1 ACID properties of transactions

6.2 Schedules and serializability

6.3 Concurrency control techniques

6.4 Deadlocks and their prevention.

35 - 3

7.

Crash Recovery and Backup

7.1 Recovery Techniques (undo, redo, logging) 39 - 42

7.2 Recovery manager and buffer management

7.3 Backup and restore procedures

8.

Database Security and Authorization

8.1 Security threats and countermeasures

8.2 User authentication and authorization

8.3 Access control and privileges

43 - 45