

# **DATABASE MANAGEMENT SYSTEM**

## **UNIT-I**

### **INTRODUCTION**

Introduction to file and database systems / database system structure – Data Models – E-R model.

## **UNIT-II**

### **RELATIONAL MODEL**

Relational model – Relational algebra and calculus – Commercial query languages – Security and integrity – functional dependency – Normalization – Relational database design.

## **UNIT-III**

Query processing – Crash recovery – Concurrency control – Distributed databases – File and system structures – Indexing and hashing.

## **UNIT-IV**

Hierarchical model – Network model – Active and deductive data bases – temporal databases – Parallel databases – Multimedia databases.

## **UNIT-V**

Object oriented databases – Design of object oriented database – Data warehousing – Data mining – Association rules – Application of data mining – Classification and prediction – XML – Case studies; Spatial databases: Definition of spatial database – MySQL spatial data types.

### **TEXT BOOKS:**

1. Ramez Elmasri, Shamkant B. Navathe, “ Fundamentals of database systems”, 5<sup>th</sup> edition, Pearson education.
2. Abraham Silberschatz, Henry. F. Korth and S. Sudhrsan, “Database system concepts”, 4<sup>th</sup> Edition, Tata McGraw Hill,2002.

## REFERENCE BOOKS:

1. C.J. Date and Kannan, “ An Introduction to Database Systems”, Pearson education ,8<sup>th</sup> Edition.
2. Narain Gehani, “ The Database Book – Principles and Practice using MySQL”, Universities Press.
3. Hector Gracia – Molina, J.D. Ullman and J. Widom, “ Database System Implementation”, Pearson Education.
4. J.D. Ullman and J. Widom, “ A First Course in Database Systems”, Pearson education, 2<sup>nd</sup> edition.