

PET8J004**DATABASE MANAGEMENT SYSTEM****MODULE-I**

Introduction - Evolution of database systems, overview of database management systems.

Entity-relationship model - Basic Concepts, Constraints, Keys, Design Issues, Entity-Relationship Diagrams, The Unified Modeling Language (UML), Class Diagrams.

MODULE-II

Relational Model - Structures of relational databases, integrity constraints; Logical database design – ER to relational, relational algebra, relational calculus, functional dependencies, multi-valued dependencies, normal forms, Decompositions into normalized relations.

MODULE-III

SQL – Simple queries, queries with more than one relation, sub queries, full relation operations, Database modifications, View definitions.

MODULE-IV

Issues in Physical Database Design – physical data storage, raid disk organization technique; file structures – sequential file organization, indices, b-trees, hash tables.

ADDITIONAL MODULE (Terminal Examination-Internal)

Details of Relational Algebra – Basic operators, extended operators, constraints.

Text Books

1. Data Base Management System Raghu Ramakrishnan, McGraw-Hill , 3rd edition,2002 .
2. Reading in Data Base Systems, Joseph M. Hellerstein, The MIT Press,4th Edition,2005.

Reference Books

1. Database system concepts, Abraham Silberschatz, Henry F Korth and Sudharshan S McGraw Hill Publishin Company Limited,1St Edition,2004.
2. Database Management System - Post, Gerald V ,Tata McGraw-Hill, 2004.
3. Fundamentals of Database Syste,Elmasri,R.A.,Navathe,Shyam B.Narosa Publishing House,2nd Edition ,1997.
4. An introduction to Database Systems - Bipin C Desai Galgotia Publication ,4th Edition, 2005