

**CSE-202-F**

**DATABASE MANAGEMENT SYSTEMS**

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Class Work Marks: 50  
Exam Marks: 100  
Total Marks: 150  
Duration of Exam: 3 Hrs.

**NOTE: For setting up the question paper, question no 1 will be set up from all the four sections which will be compulsory and of short answer type. Two questions will be set from each of the four sections. The students have to attempt first common question, which is compulsory, and one question from each of the four sections. Thus students will have to attempt 5 questions out of 9 questions.**

**Section A: Introduction, Client Server Arch., E-R Diagram and Keys**

Overview of database Management System; Various views of data, data Models, Introduction to Database Languages. Advantages of DBMS over file processing systems, Responsibility of Database Administrator, Introduction to Client/Server architecture, Three levels architecture of Database Systems, ER Diagram (Entity Relationship), mapping Constraints, Keys, Reduction of E-R diagram into tables.

**Section B: File Organization and Relational Model and Calculus**

Sequential Files, index sequential files, direct files, Hashing, B-trees Index files. Relational Model, Relational Algebra & various operations, Relational and Tuple calculus.

**Section C: Introduction to Query Languages**

QLB, QBE, Structured query language – with special reference of (SQL of ORACLE), integrity constraints, functional dependencies & NORMALISATION – (up to 4th Normal forms), BCNF (Boyce – code normal forms)

**Section D**

Introduction to Distributed Data processing, parallel Databases, data mining & data warehousing, network model & hierarchical model, Introduction to transaction, properties of transaction and life cycle of transaction, Introduction to Concurrency control and Recovery systems., need of concurrency control and recovery system, problems in concurrent transactions.

**TEXT BOOKS:**

1. Database System Concepts by A. Silberschatz, H.F. Korth and S. Sudarshan, 3<sup>rd</sup> edition, 1997, McGraw-Hill, International Edition.

2. Introduction to Database Management system by Bipin Desai, 1991, Galgotia Pub.

**REFERENCE BOOKS:**

1. Fundamentals of Database Systems by R. Elmasri and S.B. Navathe, 3rd edition, 2000, Addison-Wesley, Low Priced Edition.
2. An Introduction to Database Systems by C.J. Date, 7th edition, Addison-Wesley, Low Priced Edition, 2000.
3. Database Management and Design by G.W. Hansen and J.V. Hansen, 2nd edition, 1999, Prentice-Hall of India, Eastern Economy Edition.
4. Database Management Systems by A.K. Majumdar and P. Bhattacharyya, 5th edition, 1999, Tata McGraw-Hill Publishing.
5. A Guide to the SQL Standard, Date, C. and Darwen, H. 3rd edition, Reading, MA: 1994, Addison-Wesley.
6. Data Management & file Structure by Looms, 1989, PHI