SEMESTER- IV

COURSE CODE :- C 8
COURSE TITLE :- DATA BASE MANAGEMENT SYSTEM
CREDIT :- 4

Marks distribution

Full Marks: 15 (MSE) + 60 (ESE) = 75 Duration: 3 hrs Pass Marks: 34

This paper consists of 50 marks and divided into two groups:

Group-A: Objective questions (Compulsory)	:	1 x 10 = 10
Group-B: descriptive questions (5 out of 8 questions)	:	10 x 5 = 50

Total =		60

The questions must cover the entire syllabus with equal distribution of marks as far as practicable.

Module1: Introduction to DBMS- Purpose, difference with respect to conventional file processing system, data abstraction, data independence, data models(object-based, record based, physical data models), database manager, database administrator, overall system structure.

Module 2: Entity- Relationship model- Relationship sets, Mapping, keys and entity sets. Entity Relationship diagram, specialization, generalization and aggregation.

Module 3: Relational algebra- Project, select, Cartesian product, joins, natural join, union, intersection.

Module 4: Normalization-Functional dependency, INF, 2NF, 3NF, BCNF, multivalued dependency &4NF. Lossless joins dependency preservation.

Module 5: Transaction- concepts, transaction state, concurrent executions, serializability, conflict serializability, view serializability.

Module 6: Concurrency control- locks, granting of locks, timestamp based protocols, deadlock prevention, detection & recovery
Module 7: Security- Authorization.

ORACLE:
Module 8: Oracle: - Oracle functions, SQL, simple queries, nested sub-queries, self join, equijoin, non-equijoin, PL/SQL programming (Writing small blocks for data Manipulation). Update, Insert, Triggers

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Books Recommended:

1. DBMS -Korth
2. DBMS -C.J. Date
3. Oracle –Byross

PRACTICAL: ORACLE

Writing and executing simple and complex queries, Creation and alteration of tables updating Inserting, deleting a table. Writing simple PL/SQL codes for data manipulation