

Subject Code: MC01094031**Date: 19/01/2026****Subject Name: Relational Database Management Systems****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

| | Marks |
|---|--------------|
| Q.1 (a) Answer the following question. | 07 |
| i. Define term: Composite attribute | |
| ii. What is Database? | |
| iii. What is Meta data? | |
| iv. What is the difference between DROP and DELETE command? | |
| v. What is Rollback? | |
| vi. What is Prime attribute? | |
| vii. Define term: Data Redundancy. | |
| (b) What is database? Explain database structure with diagram. | 07 |
| Q.2 (a) What do you mean by concurrency control? Explain the types of problems encounter in Concurrency. | 07 |
| (b) Draw the ER diagram for College Management System. | 07 |
| OR | |
| (b) What are the responsibilities of the DBA and the database designers? Explain it in detail. | 07 |
| Q.3 (a) Explain the three tier architecture for web application. | 07 |
| (b) What is Relationship ? Explain it's types with example? | 07 |
| OR | |
| Q.3 (a) What is Functional Dependency? Explain Functional Dependency in detail with proper example. | 07 |
| (b) Explain the use of Group by & having clause with example. | 07 |
| Q.4 (a) What is recovery? Explain different types of failure. | 07 |
| (b) Explain ACID properties in details. | 07 |
| OR | |
| Q.4 (a) Write a short note on: system log & commit point. | 07 |
| (b) Discuss First Normal Form (1NF) and Second Normal Form(2NF). | 07 |
| Q.5 (a) What do you mean by constraint? Explain the various constraints available with SQL. | 07 |
| (b) Explain DDL & DML commands with example. | 07 |
| OR | |
| Q.5 (a) Explain Single value sub-query and multi value sub-query. | 07 |
| (b) Explain Set operations in sql. | 07 |
