

**CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS**

**II-B.TECH-I-Semester End Examinations (Supply) - December- 2024
DATABASE MANAGEMENT SYSTEMS
(Common to CSE, CSC & CSD)**

[Time: 3 Hours]

[Max. Marks: 70]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A**(20 Marks)**

1. a) List the database applications. [2M]
- b) Draw the notations of ER-Diagram. [2M]
- c) Define table Constraints. [2M]
- d) Define Aggregate Functions. [2M]
- e) What is normalization? [2M]
- f) Define functional dependency with example. [2M]
- g) Define Two Phase lock protocol. [2M]
- h) Discuss different phases of transaction. [2M]
- i) Define Indexed Sequential Access Method. [2M]
- j) List out of File Organizations. [2M]

PART-B**(50 Marks)**

2. Discuss about the Conceptual Design with example ER Model. [10M]
- OR**
3. Compare and Contrast file Systems with database systems. [10M]
4. Write briefly about logical database design. [10M]
- OR**
5. Discuss about integrity constraints over relations. [10M]
6. Define normalization? Explain 1NF, 2NF, 3NF Normal forms. [10M]
- OR**
7. Define Schema refinement in Database design and explain the BCNF with example. [10M]
8. Discuss Serializability in detail. [10M]
- OR**
9. Illustrate Concurrent execution of transaction with examples. [10M]
10. Compare I/O costs for all File Organizations. [10M]
- OR**
11. Compare and Contrast Extendible Hashing with Linear Hashing. [10M]
