CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
II–B.TECH–I–Semester End Examinations (Supply) - December- 2025
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 various types of attributes. [2M]
   b) List the database applications. [2M]
   c) Discuss the use of rename operation. [2M]
   d) Define Table Constraints and Assertions. [2M]
   e) Illustrate Functional Dependency? Why are some functional dependencies trivial. [2M]
   f) Explain Set operations in DBMS. [2M]
   g) Define Two Phase Commit protocol. [2M]
   h) Explain ACID properties. [2M]
   i) Write in detail about Static Hashing. [2M]
   j) Compare I/O costs for all File Organizations. [2M]

PART - B   (50 Marks)

2. Compare and Contrast File Systems with Database Systems. [10M]

OR

3. Distinguish Strong Entity Set with Weak Entity Set? Draw an ER diagram to illustrate weak entity set. [10M]

4. Illustrate different operations in Relational algebra with an example. [10M]

OR

5. Write briefly about Logical Database Design. [10M]

6. Explain about Schema Refinement in Database design. [10M]

OR

7. Define Functional Dependencies. How are Primary keys related to FD's. [10M]

8. Explain different types of Advanced Recovery Techniques. [10M]

OR

9. What is meant by Serializability? Explain different types of Serializability. [10M]

10. Illustrate Insertion and Deletion of an element in B+ trees with example. [10M]

OR

11. Explain in detail about ISAM. [10M]

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