MAY 2025 **P/ID 16303/PIT1C**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What is database management system?

2. Define relational schema.

3. State the need of Union operation in relational algebra.

4. What is the use of primary key?

5. Distinguish strong and weak entity.

6. What is the need of functional dependencies?

7. State the need of B Tree Index file.

8. What is dynamic hashing?

9. Define atomicity.

10. What is buffer management?

11. What is directory system?

12. Define parallel system.

PART B — (5 × 6 = 30 marks)

Answer any FIVE questions.

13. Explain Data Manipulation language in detail.

14. Discuss the disadvantages of file systems.

15. State the need of join. Explain the types of joins in detail.

16. Elaborate attributes in ER model.

17. Write short notes on Query optimization.

18. Elaborate transaction state with neat sketch.

19. Distinguish Homogenous and heterogeneous database.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Create a student table (name, regno, mark1, mark2, mark3) and Write the query for the following :

    (a) Insert five records into the table.

    (b) Retrieve all records from the table.

    (c) Add a new column for department.

21. Draw an ER diagram for university database and Library database.

22. State the need of RAID. Elaborate the types of RAID in detail.

23. Discuss serializability in transaction management in detail.

24. Elaborate distributed database in detail.
