NOVEMBER 2025 **52509/320C5B/ 341C5A/325C5B**

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Define DBMS.

2. Mention two objectives of a DBMS.

3. What is an ISA relationship in ER modeling?

4. Define candidate key, foreign key.

5. What is relational algebra?

6. What is meant by functional dependency?

7. Define 2NF with an example.

8. What is the use of SELECT in SQL?

9. List any two relational set operators in SQL.

10. Write the use of JOIN USING clause.

11. Define PL/SQL trigger.

12. Mention two string functions in SQL.

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Explain the advantages and components of DBMS.

14. Describe the process of converting an ER diagram into tables.

15. Write short notes on CODD's rules.

16. Explain the concept of normalization and illustrate 1NF and 2NF.

17. Describe any four SQL join operators.

18. Explain subqueries using IN and HAVING clauses.

19. Write the structure of a PL/SQL procedure with an example.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Discuss the architecture of DBMS and explain its components.

21. Explain relational algebra operations with suitable examples.

22. Explain the process of 3NF and BCNF with an example.

23. Write a PL/SQL program using cursor and exception handling.

24. Discuss SQL aggregate functions and conversion functions with examples.

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