MAY 2024 **P/ID 16303/PIT1C**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Write the importance of select operation.

2. What are the characteristics of SQL?

3. Define relational design and state its types.

4. Mention the weak entity set properties.

5. Mention about data mirroring.

6. Explain about seek time.

7. Define left-deep join orders.

8. What is meant by conflict serializability?

9. Define partition skew.

10. What is meant by cluster?

11. What is the function of relational schema?

12. Define normalization.

PART B — ($5 \times 6 = 30$ marks)

Answer any FIVE questions.

13. What is tuple and domain relational calculus in DBMS? Explain with example.

14. What are the properties of multivalued dependency?

15. Show the importance of indices on multiple keys with an example.

16. Give a result of transactions as SQL statements with supported queries.

17. Mention about exclusive locks with an example.

18. State the importance of hashing and neat sketch on hash structure.

19. Explain the query for Cost-Based Join Order Selection with an example.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

20. How do you write a recursive query in SQL? Give a proper example with detail explanation.

21. State the rules for functional dependencies and also mention its types.

22. Draw a neat structure on B^+-trees and show the querying process.

23. Explain the difference between the three storage types as volatile, nonvolatile and stable in terms of I/O cost.

24. What are two approaches to store the relation in the distributed database?
