DECEMBER 2024 **P/ID 16303/PIT1C**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What is the use relational algebra?

2. List the set operations in DBMS.

3. Mention the features of extended E-R model.

4. How to remove redundant attribute in entity sets?

5. What is meant by extendable hashing?

6. State the steps involved in query processing.

7. Define conflict serializability.

8. Mention about snapshot isolation.

9. Expand LDAP.

10. What is meant by white pages in directory systems?

11. What are the types of embedded SQL?

12. What is a database web interface?

PART B — ($5 \times 6 = 30$ marks)

Answer any FIVE questions.

13. Explain the advantages of embedded SQL and its properties.

14. Which are the four main parts of ER diagram? Give a suitable diagram.

15. Write an external sort-merge algorithm neatly proper diagram.

16. Explain in detail about lock based protocols.

17. Categorize on various partitioning techniques.

18. Explain the difference between data replication in a distributed system and the maintenance of a remote backup site.

19. List the roles of operating system in buffer management.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

20. Elaborate tuple relational calculus and explain with an example.

21. How can we achieve multivalued dependency in DBMS? Explain with suitable example.

22. Illustrate bitmap indices and its importance.

23. Highlight the importance of deadlock detection and recovery. Mention its three actions.

24. Explain in detail about shadow copies and shadow paging.

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