

**DECEMBER 2021**

**P/ID 17615/  
PCA4M/PCATC**

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Time : Three hours

Maximum : 80 marks

**PART A — (10 × 2 = 20 marks)**

Answer any TEN questions.

1. List few popular applications of DBMS.
2. Define the term relational algebra.
3. What is data dictionary?
4. Define strong and weak entity sets.
5. What is meant by lossless join decomposition?
6. Differentiate between super class and sub class.
7. What is static hashing?
8. What is sorting?
9. When a transaction rolls back?
10. Define the term deadlock.
11. What is meant by client server?
12. What are the network types?

**PART B — ( $5 \times 6 = 30$  marks)**

Answer any FIVE questions.

13. Write short notes on set operations.
14. With examples, explain recursive queries.
15. What are various integrity constraints? Explain.
16. Write about RAID.
17. Give a brief account on join operators with example.
18. Briefly explain concurrency control with locking methods.
19. Elaborate on directory system.

**PART C — ( $3 \times 10 = 30$  marks)**

Answer any THREE questions.

20. Explain about tuple and domain relational calculus.
21. What is Normalization? Explain different normal forms.
22. Explain in detail about file organization.

23. List and explain the types of serializability giving examples.

24. What is DML? List and explain different types of commands under this category with appropriate syntax and example.

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