DECEMBER 2020 **P/ID 17615/PCA4M/ PCATC**

Time : Three hours Maximum : 80 marks

SECTION A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Define the term DBMS.
2. Give the levels of data abstraction.
3. What are stored and derived attributes?
4. Define the term primary key.
5. List the properties of decomposition.
6. What is inheritance?
7. Define the term RAID.
8. What is sparse index?
9. What are the ACID properties?
10. Mention the types of serializability.
11. What are distributed databases?
12. Write any two DML commands with examples for their usage.

SECTION B — (5 × 6 = 30 marks)

Answer any FIVE questions.

13. Describe the disadvantages of file processing system.

14. Brief on set operations.

15. Write the features of relational design.

16. Write a short notes on normalization.

17. What is static hashing? Why we need dynamic hashing?

18. Briefly explain Buffer management.

19. Compare Homogeneous and Heterogeneous databases.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Explain about Tuple relational calculus giving examples.

21. Explain ER model with the help of a suitable diagram.

22. Show insertion and deletion operations on a B-Tree with relevant example.

23. How deadlock is handled? Explain.

24. Discuss in detail on database system architecture.
