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SDCCA-302

III Semester B.C.A./B.C.A.(DS) Degree Examination, December/January - 2025/26
(SEP Scheme Freshers)
COMPUTER APPLICATIONS
Database Management Systems
Paper - CA3T2

Time : 3 Hours **Maximum Marks : 80**

Instructions **:**

Answer all the Sections.

SECTION - A

I. Answer any Ten questions. Each question carries 2 marks. **(10×2=20)**

1. Write any two advantages of DBMS.
2. Define ER model.
3. What is entity?
4. What is a domain constraint?
5. Expand DCL and TCL.
6. What is a view in SQL?
7. Name the different data types available in PL/SQL.
8. What is a Cursor? Mention the types.
9. What is functional dependency?
10. What is deadlock?
11. List any two ACID properties.
12. What is starvation?

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SECTION - B

II. Answer any Six questions. Each question carries 5 marks. (6×5=30)

13. What is data independence? Mention its types in DBMS.

14. With a neat diagram, explain the three-schema architecture of DBMS.

15. Explain aggregate functions with examples.

16. Explain DML commands with example.

17. Explain basic concepts of PL/SQL.

18. Write a note on anomalies in relational database design.

19. Describe transaction states with a state diagram.

20. Explain the lock-based concurrency control technique with examples.

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SECTION - C

III. Answer any Three questions. Each question carries 10 marks. (3×10=30)

21. a) Explain any two data models in DBMS. **(5)**
    b) Draw an ER diagram for Library Management System with minimum four entities. **(5)**

22. a) Explain characteristics of relations. **(5)**
    b) Explain Views with example. **(5)**

23. Explain 1NF and 3NF with example. **(10)**

24. a) Explain the lost update problem with illustrations. **(5)**
    b) Explain the different types of failures that may occur in transaction processing. **(5)**