SDCCA-302

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.

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)**