Reg. No.											

Question Paper Code	12499

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023
Fourth Semester
Computer Science and Business Systems
20CBPC401 - DATABASE MANAGEMENT SYSTEMS
(Regulations 2020)

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

Marks,
K-Level, CO

1. Define Data Model.   2,K1,CO1
2. State Logical data independence.   2,K1,CO1
3. List the string operations supported by SQL.   2,K2,CO3
4. What is view in SQL? How is it defined?   2,K2,CO3
5. Define Decomposition.   2,K1,CO4
6. State the rule of transitivity.   2,K1,CO4
7. Compare sequential access devices versus random access devices with an   2,K2,CO6
   example.
8. How do you measure the cost of query evaluation?   2,K2,CO6
9. Define upgrade and downgrade.   2,K1,CO5
10. List the types of serializability.   2,K1,CO5

PART - B (5 × 16 = 80 Marks)
Answer **ANY FIVE** Questions

11. With the help of the block diagram, describe the basic architecture of a   16,K2,CO1
    Relational Database Management System.
12. Define View. Give the differences between a table and a view. List the   16,K3,CO3
    advantages and disadvantages of view. Create a view for those salespeople
    who belong to the city of New York.

salesman_id	name	city	commission
5001	James	New York	0.15
5002	John	Paris	0.13
5005	Arun	London	0.11
5006	Ajitha	Paris	0.14
5007	Veni	Rome	0.13
5003	Kumar	San Jose	0.12

13. Describe Functional Dependencies in detail.   16,K2,CO4

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **12499**

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14. Briefly describe about B+ tree index file structure.

    16,K2,CO6

15. Explain Two phase Commit and Three-Phase Commit Protocols with suitable examples.

    16,K2,CO5

16. Design a relational database for a university registrar's office. The office maintains data about each class, including the instructor, the number of students enrolled, and the time and place of the class meetings. For each student–class pair, a grade is recorded.

    16,K3,CO2

17. Explain proving soundness and Completeness of Armstrong's Axiom in detail.

    16,K2,CO4

18. List the different levels in RAID technology and explain its features.

    16,K2,CO6