

TDC (CBCS) Even Semester Exam., 2022

COMPUTER SCIENCE

(Honours)

(4th Semester)

Course No. : CSCHCC-402T

(DBMS)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks
for the questions

SECTION—A

Answer any ten questions : 2×10=20

1. Define the terms 'DBMS' and 'data model'.
2. How is data abstraction useful in developing data model?
3. What do you mean by schemas and instances?

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(Turn Over)

4. List two reasons why new values might be introduced into the database.
5. Write the characteristics of relational data model.
6. What are DDL and DML?
7. Define functional dependency.
8. What is the need of normalization in database design?
9. What are the characteristics of enhanced ER data model?
10. What is transaction log?
11. Write the different states of transaction.
12. What are commit and rollback?
13. What is indexing in DBMS?
14. Write down the properties of B⁺ tree.
15. What are file structures?

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(Continue)

(3)

SECTION--B

Answer any five questions :

6×5=30

16. How is database approach different from file systems?
17. Explain the architecture of DBMS.
18. What is the role of keys in relational database? How many types of keys are there? Explain them.
19. List any six operations of the relational algebra. Also discuss these operations.
20. What is normal form? Define (a) 1NF, (b) 2NF and (c) 3NF.
21. Explain different types of inference rules used for generating functional dependencies.
22. Explain ACID properties of transaction.
23. Why is concurrency control needed? Explain.

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24. Explain primary and secondary indexing with example.
25. What is the importance of file organization in DBMS? Explain any two file organization methods.
