



ST. FRANCIS DE SALES COLLEGE

A FRANSALIAN INSTITUTE OF HIGHER EDUCATION **AUTONOMOUS**

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END SEMESTER EXAMINATION – NOV/DEC 2025

COMPUTER SCIENCE – III SEMESTER BCA

25BCA33: DATABASE MANAGEMENT SYSTEMS

Time: 3 Hours

Max. Marks: 80

Instruction: *Answer should be written completely in English.*

SECTION - A

Answer any **FIVE** questions. Each question carries **TWO** marks.

(5X2=10)

1. Define Schema and Instance.
2. What is an Entity? Give an example.
3. What is Like Operator? Give an example.
4. What is an Anomalies? Mention its types.
5. Define a transaction in DBMS.
6. What is a save Point and Roll Back with example.
7. Define MongoDB. Mention its key features.

SECTION - B

Answer any **SIX** questions. Each question carries **FIVE** marks.

(6X5=30)

8. Create a table structure for a Student Information System using appropriate constraints (Primary Key, Foreign Key, Unique, Not Null).
9. What are all the characteristics of DBMS? Explain it.
10. Write short notes on properties of Functional Dependencies.
11. What is an attribute? Explain their types with examples.
12. Define file organization and explain the common types used in databases.
13. Define lock-based concurrency control and its basic principle.
14. Describe the CRUD operations in MongoDB with syntax examples.
15. Write a PL/SQL code for area and circumference of a circle.

SECTION - C

Answer any **FIVE** questions. Each question carries **EIGHT** marks.

(5X8=40)

16. Draw an ER diagram for the hospital management system with mapping cardinalities.
17. Explain about DBMS users with examples.
18. Discuss the structure and components of SQL language DDL, DML, and DCL commands with examples.



19. Explain all the aggregate functions and logical operators in DBMS.
20. Describe how transaction support in SQL with examples.
21. What are all the Deadlock avoidance, detection and recovery techniques? Explain it.
22. Write MongoDB Queries: a) Create a collection and insert documents into it using insertOne() and insertMany(), b) Select all documents in collection, c) Find the count of all suppliers.

