

Roll.No.

22UCSCT5008

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN  
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)  
Chromepet, Chennai - 600 044.

B.Sc.Computer Science - END SEMESTER EXAMINATIONS - NOVEMBER 2025  
SEMESTER - V

**22UCSCT5008 - Database Management Systems**

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

### Section B

Answer any **SIX** questions ( $6 \times 5 = 30$  Marks)

1. What is data modelling? Describe how functional dependency and dependency diagrams are used in database design.
2. What is De-normalization? Explain why and when it is used in database design.
3. Apply different Data Definition Language (DDL) commands used in Banking Application Development.
4. Explain the different types of constraints in Oracle and how they help maintain data integrity.
5. Discuss the different types of joins in SQL with examples. How can joins be used to establish relationships between multiple tables in a relational database?
6. What are set operations in SQL? Classify example for UNION, UNION ALL, INTERSECT, and MINUS commands.
7. Explain in detail the basic structure of a PL/SQL block with an example. Describe the role of the DECLARE, BEGIN, EXCEPTION, and END sections.
8. Define NoSQL databases. Explain the different types of NoSQL databases with one example for each.

### Section C

Answer any **THREE** questions ( $3 \times 10 = 30$  Marks)

9. What is Normalization? Explain in detail the process of normalization from First Normal Form (1NF) to Boyce-Codd Normal Form (BCNF) with appropriate examples and dependency diagrams.
10. Describe the SQL\*Plus environment in detail. Explain the steps to log in, execute SQL commands, use SQL\*Plus commands, and handle errors with suitable examples.

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11. Discuss the use of the WHERE clause, ORDER BY clause, and CASE structure in SQL. Examine how these can be combined to perform conditional retrieval and sorting of data with suitable examples.
12. What are control structures in PL/SQL? Elaborately explain the types of control structures with suitable PL/SQL examples, including IF-THEN-ELSE and LOOP statements.
13. Examine the concept of Data Dictionary Views in Oracle. Discuss how they are used to obtain metadata information about tables, columns, constraints, and users, with examples.

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