

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.C.Sc(AI) - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - IV

22UAICT4004 - Relational Database Management System

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

1. Explain ER Model with an example.
2. What is functional dependency ? Explain.
3. Explain various Data Definition Commands in details with syntax .
4. Explain Exception handling in detail.
5. Explain in detail about Relational Algebra.
6. Classify the ACID Properties of Transactions in DBMS.
7. Explain the various types of joins with neat diagram.
8. Differentiate between Implicit and Explicit cursors.

Section C

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

9. What are the various components of a DBMS? Explain with neat diagram.
10. Solve a query using relational algebra expressions. Given two tables students (student_id, student_name, age) and courses (course_id, course_name, student_id), write the relational algebra expression to find the names of all students enrolled in a course with course_name = 'Math'.
11. Explain about 3NF and BCNF with relevant table structure.

Contd...

12. Compute the Aggregate functions from the following table and also write a SQL query to find those orders where the order amount exists between 500 and 2000.

Sampletable : customer

customer_id	cust_name	city	salary
3002	Nick Rimando	New York	30000
3007	Brad Davis	New York	27000
3005	Graham Zusi	California	45000
3008	Julian Green	London	50000
3004	Fabian Johnson	Paris	1,00,000
3009	Geoff Cameron	Berlin	65000
3003	Jozy Altidor	Moscow	56000

13. Ascertain the Structure of a PL/SQL Block and Explain with an Example.
