



Exercise: 03

SQL Queries

24 – Dec – 2025

Observation (5 Marks)

1. Write the syntax with example for the following **SET OPERATIONS**:
 - a. UNION
 - b. UNION ALL
 - c. INTERSECT
 - d. EXCEPT
2. Write the syntax and example for a **Subquery** used in:
 - a. SELECT clause
 - b. WHERE clause
3. Write the syntax and example for the following operators:
 - a. IN
 - b. ANY
 - c. ALL
4. Explain the use of **EXISTS** with a suitable example.
5. List any four **Aggregate Functions** with their purpose.

Execution (15 Marks)

(Create the required tables such as **STUDENT, FACULTY, COURSE, DEPARTMENT, MARKS, etc.,** with appropriate attributes and constraints)

1. Display the student IDs of students belonging to **Computer Science department** and **Information Technology department** using UNION.
2. List the faculty IDs who are teaching **both UG and PG courses** using INTERSECT.
3. Display the student IDs who are enrolled in **UG courses but not in PG courses** using EXCEPT.
4. Display the details of students who scored **more than the average marks**.
5. List the faculty details whose salary is **greater than the salary of any faculty in IT department**.
6. Display course details which have **maximum credits** using a subquery.
7. List the student details who are **not assigned a faculty advisor (NULL)**.
8. Display the faculty details **who guide at least one student** using EXISTS.
9. Display the students whose marks are **greater than ALL marks obtained in a particular subject**.
10. List the student details whose department ID is **IN** the list of departments offering more than 3 courses.
11. Display the **total number of students** in each department.
12. Find the **average salary** of faculty in each department.
13. Display the **maximum and minimum marks** obtained in each subject.
14. List departments having **more than 5 students** using HAVING clause.
15. Display the **count of courses offered** by each department.