

# **SQL ASSIGNMENT – BEGINNER LEVEL**

## **Instructions for Students:**

- 1 This assignment is based on real-time scenarios.
- 2 Difficulty level is very easy.
- 3 Write only SQL queries. No explanation is required.
- 4 Use Oracle SQL syntax.
- 5 Attempt all questions.

## **Scenario:**

You are working as a junior database trainee in a small company. Your task is to manage data related to employees, departments, customers, and orders using SQL.

## **Table Structures (Given)**

- 1 **EMPLOYEES** (emp\_id, emp\_name, salary, dept\_id, city)
- 2 **DEPARTMENTS** (dept\_id, dept\_name)
- 3 **CUSTOMERS** (cust\_id, cust\_name, email, city)
- 4 **ORDERS** (order\_id, cust\_id, order\_amount, order\_date)

## **A. Datatypes**

- 1 Create a table products with product\_id, product\_name, price, created\_date.
- 2 Create a table students with student\_id, student\_name, marks.

## **B. DDL (Create, Alter, Drop)**

- 1 Create the employees table using appropriate datatypes.
- 2 Add phone\_number column to employees table.
- 3 Modify emp\_name size to 100 characters.
- 4 Drop phone\_number column from employees table.
- 5 Drop students table.

## **C. DML (Insert, Update, Delete)**

- 1 Insert one record into employees table.
- 2 Insert two records into departments table.
- 3 Update salary of employee whose emp\_id is 101.
- 4 Delete employee who lives in Mumbai.

## **D. DQL (SELECT)**

- 1 Display all employees.
- 2 Display emp\_name and salary of all employees.
- 3 Display all customers from Delhi.

## **E. WHERE Clause**

- 1 Display employees whose salary is greater than 30000.
- 2 Display employees working in department 10.
- 3 Display customers from Bangalore.

## **F. ORDER BY**

- 1 Display employees sorted by salary in ascending order.
- 2 Display customers sorted by name in descending order.

## **G. Arithmetic Operators**

- 1 Display employee name and annual salary.
- 2 Display employee name and salary after adding 5000 bonus.

## **H. Set Operators**

- 1 Display employees from Mumbai and Pune using UNION.
- 2 Display common employees from Mumbai and Pune using INTERSECT.

## **I. Constraints**

- 1 Create users table with PRIMARY KEY, UNIQUE and NOT NULL constraints.
- 2 Create products table with CHECK constraint on price.

## **J. Composite Key**

- 1 Create order\_items table with composite primary key.

## **K. Joins**

- 1 Display employee name and department name using INNER JOIN.
- 2 Display all employees even if department is not assigned.
- 3 Display department name and employees working in each department.

## **L. TCL (Transaction Control)**

- 1 Insert a record and COMMIT.
- 2 Update salary and ROLLBACK.
- 3 Create SAVEPOINT, update salary and rollback to savepoint.

## **M. DCL (Basic)**

- 1 Grant SELECT on employees to test\_user.
- 2 Revoke SELECT from test\_user.