SQL PRACTICAL - COMPLETE QUESTIONS WITH TABLE DATA

A. TABLE CREATION & INSERTION

1. Write a query to create a table for departments with dept_id and dept_name.

Departments Table Data:

dept_id	dept_name
1	HR
2	IT
3	Finance

2. Create an Employees table with emp_id, emp_name, salary, dept_id, and join_date.

Employees Table Data:

emp_id	emp_name	salary	dept_id	join_date
101	Alice	75000	2	2022-04-10
102	Bob	60000	1	2019-12-20
103	Charlie	82000	3	2021-06-15
104	David	55000	2	2020-08-05
105	Eva	90000	3	2023-02-25

3. Insert at least 3 records into the Departments table.

(Use the above Department table values.)

4. Insert 5 records into the Employees table.

(Use the above Employee table values.)

B. SELECT & WHERE Clause

5. Display all employee names and their salaries.

6. Select employees with a salary greater than 60000.

7. Show employees who joined after 1st January 2021.

8. Retrieve employee details where department ID is 2.

9. Display employees whose name starts with 'A'.

C. UPDATE & DELETE

10. Update the salary of employees in the 'HR' department by 10%.

11. Change the department of employee 'Bob' to department ID 3.

12. Delete records of employees who joined before 2020.

13. Delete an employee with emp_id = 104.

14. Increase salary by 5000 for employees in department ID 1.

D. AGGREGATE FUNCTIONS

15. Find the total salary expense of all employees.

16. Calculate the average salary in each department.

17. Display the highest salary in the employee table.

18. Count the total number of employees.

19. Find the minimum salary in department ID 2.

20. Show the number of employees in each department.

E. JOIN Queries

21. Write a query to display employee names along with their department names.

22. Use LEFT JOIN to show all departments and any employees.

23. Use RIGHT JOIN to show all employees and their department names.

24. Perform a FULL OUTER JOIN on Employees and Departments tables.

25. Show all departments that have no employees assigned (using JOIN).

F. Subqueries

26. Find employees who earn more than the average salary.

27. Select employees whose salary equals the maximum salary in their department.

28. List employees who work in the 'IT' or 'HR' department using a subquery.

29. Display employee names where department name is 'Finance' using subquery.

30. Show departments where the maximum salary exceeds 60000 (using correlated subquery).