SQL Interview Questions & Answers

Q1: Find the second highest salary from the Employees table.
A: SELECT MAX(salary) FROM employees WHERE salary < (SELECT MAX(salary) FROM employees);

Q2: Fetch the top 3 salaries from the Employees table.
A: SELECT DISTINCT salary FROM employees ORDER BY salary DESC LIMIT 3;

Q3: Find employees who earn more than their manager.
A: SELECT e.employee_id, e.name, e.salary FROM employees e JOIN employees m ON e.manager_id = m.employee_id WHERE e.salary > m.salary;

Q4: List departments with the highest number of employees.
A: SELECT department_id, COUNT(*) AS employee_count FROM employees GROUP BY department_id ORDER BY employee_count DESC LIMIT 1;

Q5: Find duplicate records in a table.
A: SELECT name, COUNT(*) FROM employees GROUP BY name HAVING COUNT(*) > 1;

Q6: Get the nth highest salary (example: 5th highest).
A: SELECT salary FROM (SELECT salary, DENSE_RANK() OVER (ORDER BY salary DESC) AS rnk FROM employees) ranked WHERE rnk = 5;

Q7: Find employees who do not belong to any department.
A: SELECT * FROM employees WHERE department_id IS NULL;

Q8: Display the total salary paid per department.
A: SELECT department_id, SUM(salary) AS total_salary FROM employees GROUP BY department_id;

Q9: List employees hired in the last 30 days.
A: SELECT * FROM employees WHERE hire_date >= CURDATE() - INTERVAL 30 DAY;

Q10: Find employees with the same salary.
A: SELECT salary, GROUP_CONCAT(name) AS employees FROM employees GROUP BY salary HAVING COUNT(*) > 1;

Q11: Show department names with no employees.
A: SELECT d.department_id, d.department_name FROM departments d LEFT JOIN employees e ON d.department_id = e.department_id WHERE e.department_id IS NULL;

Q12: Get the highest salary in each department.
A: SELECT department_id, MAX(salary) AS highest_salary FROM employees GROUP BY department_id;

Q13: Find the average salary of employees.

A: `SELECT AVG(salary) AS avg_salary FROM employees;`

Q14: Count employees per job role.

A: `SELECT job_title, COUNT(*) AS employee_count FROM employees GROUP BY job_title;`

Q15: Find employees whose names start with 'A'.

A: `SELECT * FROM employees WHERE name LIKE 'A%';`

Q16: Get employees who joined before a certain date.

A: `SELECT * FROM employees WHERE hire_date < '2023-01-01';`

Q17: Find employees with no assigned manager.

A: `SELECT * FROM employees WHERE manager_id IS NULL;`

Q18: Get employees with salaries between 50,000 and 80,000.

A: `SELECT * FROM employees WHERE salary BETWEEN 50000 AND 80000;`

Q19: Show employees sorted by salary (descending) and name (ascending).

A: `SELECT * FROM employees ORDER BY salary DESC, name ASC;`

Q20: Find the department with the maximum total salary expense.

A: `SELECT department_id FROM employees GROUP BY department_id ORDER BY SUM(salary) DESC LIMIT 1;`