1. How to retrieve the second-highest salary of an employee?

SELECT MAX(salary)

FROM employees

WHERE salary < (SELECT MAX(salary) FROM employees);

2. How to get the nth highest salary in   ?

SELECT salary

FROM (SELECT salary, DENSE_RANK() OVER (ORDER BY salary DESC) AS rank

   FROM employees) AS ranked_salaries

WHERE rank = N;

3. How do you fetch all employees whose salary is greater than the average salary?

SELECT *

FROM employees

WHERE salary > (SELECT AVG(salary) FROM employees);

4. Write a query to display the current date and time in   .

SELECT CURRENT_TIMESTAMP;

5. How to find duplicate records in a table?

```
SELECT column_name, COUNT(*)

FROM table_name

GROUP BY column_name

HAVING COUNT(*) > 1;
```

6. How can you delete duplicate rows in   ?

```
WITH CTE AS (

  SELECT column_name,

      ROW_NUMBER() OVER (PARTITION BY column_name ORDER BY
column_name) AS row_num

  FROM table_name

)

DELETE FROM CTE WHERE row_num > 1;
```

7. How to get the common records from two tables?

```
SELECT *

FROM table1

INTERSECT

SELECT *

FROM table2;
```

8. How to retrieve the last 10 records from a table?

```
SELECT *
FROM employees
ORDER BY employee_id DESC
LIMIT 10;
```

9. How do you fetch the top 5 employees with the highest salaries?

```
SELECT *
FROM employees
ORDER BY salary DESC
LIMIT 5;
```

10. How to calculate the total salary of all employees?

```
SELECT SUM(salary)
FROM employees;
```

11. How to write a query to find all employees who joined in the year 2020?

```
SELECT *
FROM employees
WHERE YEAR(join_date) = 2020;
```

12. Write a query to find employees whose name starts with 'A'.

```
SELECT *
```

FROM employees

WHERE name LIKE 'A%';

13. How can you find the employees who do not have a manager?

SELECT *

FROM employees

WHERE manager_id IS NULL;

14. How to find the department with the highest number of employees?

SELECT department_id, COUNT(*)

FROM employees

GROUP BY department_id

ORDER BY COUNT(*) DESC

LIMIT 1;

15. How to get the count of employees in each department?

SELECT department_id, COUNT(*)

FROM employees

GROUP BY department_id;

16. Write a query to fetch employees having the highest salary in each department.

SELECT department_id, employee_id, salary

FROM employees AS e

WHERE salary = (SELECT MAX(salary)

FROM employees

WHERE department_id = e.department_id);

17. How to write a query to update the salary of all employees by 10%?

UPDATE employees

SET salary = salary * 1.1;

18. How can you find employees whose salary is between 50,000 and 1,00,000?

SELECT *

FROM employees

WHERE salary BETWEEN 50000 AND 100000;

19. How to find the youngest employee in the organization?

SELECT *

FROM employees

ORDER BY birth_date DESC

LIMIT 1;

20. How to fetch the first and last record from a table?

(SELECT * FROM employees ORDER BY employee_id ASC LIMIT 1)

UNION ALL

(SELECT * FROM employees ORDER BY employee_id DESC LIMIT 1);

21. Write a query to find all employees who report to a specific manager.

SELECT *

FROM employees

WHERE manager_id = ?;

22. How can you find the total number of departments in the company?

SELECT COUNT(DISTINCT department_id)

FROM employees;

23. How to find the department with the lowest average salary?

SELECT department_id, AVG(salary)

FROM employees

GROUP BY department_id

ORDER BY AVG(salary) ASC

LIMIT 1;

24. How to delete all employees from a department in one query?

DELETE FROM employees

WHERE department_id = ?;

25. How to display all employees who have been in the company for more than 5 years?

SELECT *

FROM employees

WHERE DATEDIFF(CURDATE(), join_date) > 1825;

26. How to find the second-largest value from a table?

SELECT MAX(column_name)

FROM table_name

WHERE column_name < (SELECT MAX(column_name) FROM table_name);

27. How to write a query to remove all records from a table but keep the table structure?

TRUNCATE TABLE table_name;

28. Write a query to get all employee records in XML format.

SELECT employee_id, name, department_id

FROM employees

FOR XML AUTO;

29. How to get the current month's name from   ?

```
SELECT MONTHNAME(CURDATE());
```

30. How to convert a string to lowercase in   ?

```
SELECT LOWER('STRING_VALUE');
```

31. How to find all employees who do not have any subordinates?

```
SELECT *
FROM employees
WHERE employee_id NOT IN (SELECT manager_id FROM employees WHERE
manager_id IS NOT NULL);
```

32. Write a query to calculate the total sales per customer in a sales table.

```
SELECT customer_id, SUM(sales_amount)
FROM sales
GROUP BY customer_id;
```

33. How to write a query to check if a table is empty?

```
SELECT CASE
    WHEN EXISTS (SELECT 1 FROM table_name)
    THEN 'Not Empty'
    ELSE 'Empty'
END;
```

34. How to find the second highest salary for each department?

```
SELECT department_id, salary

FROM (SELECT department_id, salary,

        DENSE_RANK() OVER (PARTITION BY department_id ORDER BY salary
DESC) AS rank

    FROM employees) AS ranked_salaries

WHERE rank = 2;
```

35. Write a query to fetch employees whose salary is a multiple of 10,000.

```
SELECT *

FROM employees

WHERE salary % 10000 = 0;
```

36. How to fetch records where a column has null values?

```
SELECT *

FROM employees

WHERE column_name IS NULL;
```

37. How to write a query to find the total number of employees in each job title?

```
SELECT job_title, COUNT(*)

FROM employees

GROUP BY job_title;
```

38. Write a query to fetch all employees whose names end with 'n'.

```sql
SELECT *
FROM employees
WHERE name LIKE '%n';
```

39. How to find all employees who work in both departments 101 and 102?

```sql
SELECT employee_id
FROM employees
WHERE department_id IN (101, 102)
GROUP BY employee_id
HAVING COUNT(DISTINCT department_id) = 2;
```

40. Write a query to fetch the details of employees with the same salary.

```sql
SELECT *
FROM employees
WHERE salary IN (SELECT salary
        FROM employees
        GROUP BY salary
        HAVING COUNT(*) > 1);
```

41. How to update salaries of employees based on their department?

```
UPDATE employees

SET salary = CASE

    WHEN department_id = 101 THEN salary * 1.10

    WHEN department_id = 102 THEN salary * 1.05

    ELSE salary

END;
```

42. How to write a query to list all employees without a department?

```
SELECT *

FROM employees

WHERE department_id IS NULL;
```

43. Write a query to find the maximum salary and minimum salary in each department.

```
SELECT department_id, MAX(salary), MIN(salary)

FROM employees

GROUP BY department_id;
```

44. How to list all employees hired in the last 6 months?

```
SELECT *

FROM employees

WHERE hire_date > ADDDATE(CURDATE(), INTERVAL -6 MONTH);
```

45. Write a query to display department-wise total and average salary.

```sql
SELECT department_id, SUM(salary) AS total_salary, AVG(salary) AS avg_salary

FROM employees

GROUP BY department_id;
```

46. How to find employees who joined the company in the same month and year as their manager?

```sql
SELECT e.employee_id, e.name

FROM employees e

JOIN employees m ON e.manager_id = m.employee_id

WHERE MONTH(e.join_date) = MONTH(m.join_date)

  AND YEAR(e.join_date) = YEAR(m.join_date);
```

47. Write a query to count the number of employees whose names start and end with the same letter.

```sql
SELECT COUNT(*)

FROM employees

WHERE LEFT(name, 1) = RIGHT(name, 1);
```

48. How to retrieve employee names and salaries in a single string?

```sql
SELECT CONCAT(name, ' earns ', salary) AS employee_info

FROM employees;
```

49. How to find employees whose salary is higher than their manager's salary?

```
SELECT e.employee_id, e.name

FROM employees e

JOIN employees m ON e.manager_id = m.employee_id

WHERE e.salary > m.salary;
```

50. Write a query to get employees who belong to departments with less than 3 employees.

```
SELECT *

FROM employees

WHERE department_id IN (SELECT department_id

        FROM employees

        GROUP BY department_id

        HAVING COUNT(*) < 3);
```

51. How to write a query to find employees with the same first name?

```
SELECT *

FROM employees

WHERE first_name IN (SELECT first_name

        FROM employees

        GROUP BY first_name

        HAVING COUNT(*) > 1);
```

52. How to write a query to delete employees who have been in the company for more than 15 years?

```
DELETE FROM employees
WHERE DATEDIFF(CURDATE(), join_date) > 5475;
```

53. Write a query to list all employees working under the same manager.

```
SELECT *
FROM employees
WHERE manager_id = ?;
```

54. How to find the top 3 highest-paid employees in each department?

```
SELECT *
FROM (SELECT *,
        DENSE_RANK() OVER (PARTITION BY department_id ORDER BY salary
DESC) AS rank
    FROM employees) AS ranked_employees
WHERE rank <= 3;
```

55. Write a query to list all employees with more than 5 years of experience in each department.

```
SELECT *
FROM employees
WHERE DATEDIFF(CURDATE(), join_date) > 1825;
```

56. How to list all employees in departments that have not hired anyone in the past 2 years?

SELECT *

FROM employees

WHERE department_id IN (SELECT department_id

        FROM employees

        GROUP BY department_id

        HAVING MAX(hire_date) < ADDDATE(CURDATE(), INTERVAL -2

YEAR));

57. Write a query to find all employees who earn more than the average salary of their department.

SELECT *

FROM employees e

WHERE salary > (SELECT AVG(salary)

        FROM employees

        WHERE department_id = e.department_id);

58. How to list all managers who have more than 5 subordinates?

SELECT *

FROM employees

WHERE employee_id IN (SELECT manager_id

        FROM employees

```
        GROUP BY manager_id
        HAVING COUNT(*) > 5);
```

59. Write a query to display employee names and hire dates in the format "Name - MM/DD/YYYY".

```
SELECT CONCAT(name, ' - ', DATE_FORMAT(hire_date, '%m/%d/%Y')) AS
employee_info

FROM employees;
```

60. How to find employees whose salary is in the top 10%?

```
SELECT *

FROM employees

WHERE salary >= (SELECT PERCENTILE_CONT(0.9)
        WITHIN GROUP (ORDER BY salary ASC)
        FROM employees);
```

61. Write a query to display employees grouped by their age brackets (e.g., 20-30, 31-40, etc.).

```
SELECT CASE
    WHEN age BETWEEN 20 AND 30 THEN '20-30'
    WHEN age BETWEEN 31 AND 40 THEN '31-40'
    ELSE '41+'
END AS age_bracket,
COUNT(*)
```

FROM employees

GROUP BY age_bracket;

62. How to find the average salary of the top 5 highest-paid employees in each department?

SELECT department_id, AVG(salary)

FROM (SELECT department_id, salary,

      DENSE_RANK() OVER (PARTITION BY department_id ORDER BY salary DESC) AS rank

  FROM employees) AS ranked_employees

WHERE rank <= 5

GROUP BY department_id;

63. How to calculate the percentage of employees in each department?

SELECT department_id,

  (COUNT(*) * 100.0 / (SELECT COUNT(*) FROM employees)) AS percentage

FROM employees

GROUP BY department_id;

64. Write a query to find all employees whose email contains the domain '@example.com'.

SELECT *

FROM employees

WHERE email LIKE '%@example.com';

65. How to retrieve the year-to-date sales for each customer?

SELECT customer_id, SUM(sales_amount)

FROM sales

WHERE sale_date BETWEEN '2024-01-01' AND CURDATE()

GROUP BY customer_id;

66. Write a query to display the hire date and day of the week for each employee.

SELECT name, hire_date, DAYNAME(hire_date) AS day_of_week

FROM employees;

67. How to find all employees who are older than 30 years?

SELECT *

FROM employees

WHERE DATEDIFF(CURDATE(), birth_date) / 365 > 30;

68. Write a query to display employees grouped by their salary range (e.g., 0-20K, 20K-50K).

SELECT CASE

    WHEN salary BETWEEN 0 AND 20000 THEN '0-20K'

    WHEN salary BETWEEN 20001 AND 50000 THEN '20K-50K'

    ELSE '50K+'

```
        END AS salary_range,

        COUNT(*)

FROM employees

GROUP BY salary_range;
```

69. How to list all employees who do not have a bonus?

```
SELECT *

FROM employees

WHERE bonus IS NULL;
```

70. Write a query to display the highest, lowest, and average salary for each job role.

```
SELECT job_role, MAX(salary) AS highest_salary, MIN(salary) AS lowest_salary,
AVG(salary) AS avg_salary

FROM employees

GROUP BY job_role;
```