

11, What is purpose of the SELECT statement in SQL?

- Retrieve data it is allowed to fetch data from one or more tables in a database

- Filtered and sort allows filtering (where) and sorting (ORDER BY) of result based on specific conditions

- customized output: you can choose specify columns, apply functions (like SUM, COUNT) and rename column AS

12, How can you retrieve only specific column from table?

Syntax:-

```
SELECT column1, column2 FROM table_name;
```

Example:-

```
SELECT name, age from students;
```

13, What does the DISTINCT keyword do in SQL query?

The distinct keyword in SQL is used to remove duplicate values from the result set.

Purpose:- It ensures the only unique rows are return from specified columns.

(Eg)

SELECT DISTINCT city FROM customers;

14, How would you filter records using WHERE clause?

You can filter records using the WHERE clause by specifying an condition in a SQL SELECT statement.

Syntax:- SELECT column 1, column 2 from table-name
where condition;

Example:-

SELECT name, age FROM students where age > 18;

15, What are comparison operators in SQL? Give Examples
Comparison operators are used in the WHERE clause to compare value and filter records.

operator	Description	Example
=	Equal to	where age = 18
<> or !=	Not Equal to	WHERE City <> 'delhi'
>	greater than	WHERE marks > 75
<	less than	where age < 30
>=	greater than Equal to	WHERE Salary >= 5000
<=	less than Equal to	WHERE Exp <= 3

16, What are logical operators AND, OR, NOT how they used in SQL?

1. AND

- Returns row only if all condition are true

SELECT * FROM employees WHERE dept = 'HR' AND salary > 33000;

2, OR

- return row if at least one condition true

SELECT * FROM employees WHERE dept = 'HR' OR dept = 'IT';

3, NOT

- reverse the result of a condition

SELECT * FROM employees WHERE NOT dept = 'HR';

17, how does the LIKE OPERATOR work?

What do % and _ mean?

The like operator is used in the WHERE clause to search for a specified pattern in a column.

- Wild cards used with LIKE:-

1, % (Percent sign)

- Represent zero, one, or many characters

- Example

```
SELECT * FROM customer where name LIKE 'A%';
```

O/P:- ARUN

2, _ (underscore)

- Represent a single character.

Example:-

```
SELECT * FROM products WHERE code LIKE 'P_1';
```

O/P:- Product 1

18, How do between and in work for filtering values ?

1. BETWEEN

- Filters data within a range
- Works with numbers, dates, text

Syntax:-

```
SELECT * FROM student WHERE age BETWEEN 18  
AND 25;
```


2. IN

- Filters data that matches any value in given list

Syntax :-

```
SELECT * FROM employees WHERE dept IN ('HR', 'IT');
```

19, What is difference between IS NULL and = NULL?

IS NULL :-

- Used to check if a column has no value

(eg)

```
SELECT * FROM STUDENTS where email is null
```

= NULL

- Incorrect this will not work in SQL
- NULL means unknown

20, how do you sort query result using ORDER BY?

how do you sort multiple columns.

The ORDER BY clause is used to sort query results by one or more columns

Ascending:-

Syntax:-

SELECT * FROM students ORDER BY name;

Descending:-

SELECT * FROM students ORDER BY age DESC;

Multiple columns:-

SELECT * FROM students ORDER BY grade DESC,
name ASC;