**Typical questions on basic level of SQL:**

1. Explain the different DDL, DML, DQL, TCL commands of SQL?
2. Explain different types of SQL Joins?
3. What is the minimum number of join conditions required for joining ***n*** number of tables?
4. What is self-join? Can you give a meaningful example for self-join?
5. What is cross-join? Give a meaningful example for cross-join?
6. Difference between TRUNCATE & DELETE statements
7. What is a Stored Procedure? What are the advantages and disadvantages of using a stored procedure?
8. How to find the nth highest salary from Employee table
9. Difference between UNION and UNION ALL commands in SQL
10. What care should be taken when making a UNION of 2 or more SELECT statements.
11. Explain how INTERSECT works in SQL.
12. Explain how EXCEPT works in SQL (In some database software MINUS is used instead of EXCEPT)
13. How many primary keys can we have in a database table?
14. Difference between Unique Key and Primary Key in SQL
15. What is the difference between Primary and Foreign key in SQL?
16. What is the difference between simple primary key and composite primary key?
17. What is the difference between WHERE and HAVING clause in SQL
18. What are the different aggregate functions? [Aggregate functions of SQL are also referred to as Group functions or multi-row functions]
19. What is the relation between aggregate functions and GROUP BY clause?
20. How do aggregate functions handle NULL values?
21. How to change the gender column value from Male to Female and Female to Male using single Update statement.
22. What will be the output of the below queries?

SELECT \* FROM EMP WHERE 1 = 1;

SELECT \* FROM EMP WHERE 1 = 0;

1. Explain different usages of a sub-query. What is the order in which a query with a sub-query gets executed?
2. Syntax for UPDATE, DELETE and INSERT statements.
3. Explain the different clauses (parts) of a SELECT statement.
4. SELECT statement for Top-N / Bottom-N analysis

Query to fetch data of employees with top-5 salaries (ignore NULL values)

Query to fetch data of 3 employees receiving the lowest commission (ignore NULL values)

1. SELECT statement to Nth-Highest or Nth-lowest

Query to fetch data of employees receiving 6th highest salary

Query to fetch data of employees receiving 3rd lowest salary

1. Explain ACID (Atomicity, Consistency, Isolation, Durability) properties
2. What is a stored procedure? Explain different categories/types of parameters and their usage w.r.t a stored procedure.
3. What are the advantages and disadvantages of using a database stored procedure?
4. **What is Normalization?**
5. **Explain 1NF, 2NF and 3NF in normalization?**
6. **What is de-normalization? Why is it done?**