■ SQL Interview Preparation Guide ■

Detailed company-wise interview questions with theory, coding, and real-world SQL scenarios

- ■ Interview preparation notes
- ■ Most repeated coding questions
- ■ Aditional Fastrack 6-Page Notes
- ■ Interview experiences
- ■ Real-time scenarios

■ Company-Wise Interview Experiences

TCS

Theoretical Questions:

– What is the difference between WHERE and HAVING clause?

– Explain normalization and its types.

– What are indexes and how do they improve performance?

– What is a subquery and correlated subquery?

– What are the different types of joins in SQL?

Coding Questions:

– Write a query to find the second highest salary from Employee table.

– Find employees who have the same salary using a self join.

– Get department-wise maximum salary and employee name.

Real-Time Scenario:

– Build a report that lists top 3 selling products by region using GROUP BY and RANK().

Infosys

Theoretical Questions:

– Difference between UNION and UNION ALL.

– What are stored procedures and triggers?

– Explain ACID properties in SQL.

– What is a CTE (Common Table Expression)?

– How does SQL handle NULLs in comparison?

Coding Questions:

– Find duplicate records in a table.

– Write a query to transpose rows to columns.

– Get the cumulative sum of sales by date.

Real-Time Scenario:

– Create a data audit log using AFTER INSERT and UPDATE triggers.

Accenture

Theoretical Questions:

– Explain clustered vs non-clustered indexes.

– What are window functions? Give examples.

– What is the difference between DELETE and TRUNCATE?

– How do transactions work in SQL?

– What is the use of EXISTS and NOT EXISTS?

Coding Questions:

– Query to fetch latest record per user using ROW_NUMBER().

– Pivot product sales into monthly columns.

– Write a query to identify orphan records using LEFT JOIN.

Real-Time Scenario:

– Design an ETL-ready summary view combining multiple normalized tables.

Capgemini

Theoretical Questions:

– Explain denormalization and when it is useful.

– How do you optimize SQL queries?

– What is the use of COALESCE and NULLIF?

– Explain how to use CASE statements in SQL.

– What is a view and how does it differ from a table?

Coding Questions:

– Calculate average salary by department excluding NULLs.

– Write SQL to list managers with more than 5 employees.

– Get count of records updated today using audit timestamp.

Real-Time Scenario:

– Generate KPI metrics using CASE WHEN logic in a SELECT query.

Wipro

Theoretical Questions:

– What are constraints? Explain PRIMARY KEY and FOREIGN KEY.

– What are scalar functions in SQL?

– Explain temporary tables and table variables.

– Difference between IN and EXISTS.

– What is the use of MERGE statement?

Coding Questions:

– Write a SQL to update salaries by 10% where performance is 'Excellent'.

– Create a running total column for monthly revenue.

– Find top 2 departments with highest average salary.

Real-Time Scenario:

– Design a reporting query to compare YoY growth using self-joins.