**Most commonly asked T-SQL interview questions…**

1. What are statistics? Index vs Column Statistics?
2. Clustered vs Non-Clustered Indexes?
3. What is Filtered index, Unique Index, Index with Included columns, covering index?
4. What is index fragmentation and how to fix it?
5. Explain Columnstore indexes and types
6. Name all 6 types of Integrity constraints
7. Difference between Primary Key and Unique Constraint
8. Difference between Unique Index vs Unique Constraint
9. What is Index Scan?
10. What is Heap? B-Tree?
11. When is the benefit of indexes? What are disadvantages?
12. What is the maximum number of index per table? Clustered vs Nonclustred?
13. What is Execution Plan, Difference between Scan and Seek?
14. How to get rid of Key LookUP/BookMark LookUp?
15. What are red flags of execution plan?
16. When to use Set Statistics IO/OFF? What are logical Reads?
17. Can Primary Key have non-clustered index?
18. Differences between Delete and Truncate
19. Difference between Stor Proc and UDF?
20. Can we call a procedure from a function?
21. Can we call UDF in stor proc?
22. Can we write DML inside a UDF?
23. What is Subquery? Correlated Subquery?
24. View vs Indexed View?
25. Can we put order by inside view?
26. What is CTE? Recursive CTE? What are benefits of it? When CTE should not be used?
27. What is MAXRECURSION? What is default MAXRECURSION for recursive CTE?
28. What is the limit of OPTION (MAXRECURSION 0)?
29. In Option (MAXRECURSION N)? Can we specify N number > 32767?
30. What are Window Functions?
31. What are different types of Window functions? Give examples...
32. Difference between Row\_Number vs Rank vs Dense\_Rank?
33. What are benefits of stor procs? Benefits of views?
34. What are different types of UDF?
35. What are different types of joins? Difference between Inner/Outer(left/right/full)/Cross Joins?
36. What is Self Join?
37. Joins vs Union? Union vs Union all?
38. What are different types of Set Operators? Union vs Intersect vs Except?
39. Cross Appy vs Outer Apply
40. What is Merge statement?
41. Joins vs Exist vs In
42. Explain system databases Master/Model/TempDb/Msdb/ResourceDB
43. Difference between .mdf, .ndf and .ldf
44. Temp table vs Table Variable? Can we index Temp table? Can table variable have indexes?
45. How do you do performance tuning on slow running query/stor proc?
46. What are transactions? What are ACID properties of transactions?
47. What is sp\_who2? Sp\_lock?
48. I have opened a nested transaction inside an outer transaction. if I do rollback, which transaction will roll back?
49. What are new features of SQL Server 2019?
50. What are physical joins in SQL Server? Difference between Nested Loop, Merge and Hash Match?
51. I have a table with millions of rows. I want to retain only last 5% of the rows? How to do it?
52. Why loops, cursors and other row by row operations bad? What is Set-Based operation?
53. Which is better a CTE or a subquery? Why?
54. What is linked server?
55. Can we use an ORDER BY clause in a CTE?
56. What is identity column?
57. ISNULL() vs COALESCE()?
58. How to delete duplicate rows in SQL Server?
59. Different ways of calculating 3rd Highest salary?
60. Different ways of calculating running total?
61. A string, with more than hundreds of characters, has a special character X. X is repeated many times in this string. Write a select statement to count the number of Xs in this string..
62. What is database normalization? Why important? What are different forms?
63. What is referential integrity? Cascading referential integrity?
64. What is the use of DBCC commands?
65. What is Database Collation? Case sensitive vs case incensitive?
66. Please give examples for one-to-one, one-to-many and many-to-many relationships?
67. What is the difference between a HAVING CLAUSE and a WHERE CLAUSE?
68. STUFF function vs REPLACE function.
69. What is Try.. Catch block in Tsql?
70. Can we rewrite subqueries as joins?
71. How to get random 100 rows from a table?
72. What are Magic Tables in SQL Server?
73. What is TABLESAMPLE?
74. What is SQL injection?
75. What is BulkCopy?
76. What are DMV? (Dynamic Management Views)
77. Difference between char/varchar/nchar/nvharchar?
78. What lock, block, deadlock? what is KILL command?
79. Sql Profiler vs Extended Events?
80. What are different SQL Server High Availability (HA) solutions? Difference between Replication/Log Shipping/Mirroring/Clustering/Always ON Availability Groups..