1. What is RDBMS?
2. What is a FOREIGN KEY?
3. What is de-normalization?
4. What is a view?
5. What is a subquery? Explain the properties of a subquery?
6. What is OLTP (Online Transaction Processing)?
7. What is the difference between a HAVING clause and a WHERE clause?
8. What is PIVOT and UNPIVOT?
9. What is the difference between a user-defined function (UDF) and a stored procedure?
10. What is collation?
11. What are GROUPING SETS?
12. Can we rewrite sub-queries into simple select statements using joins and CTEs?
13. Where are SQL Server usernames and passwords stored in SQL Server?
14. What is the maximum row size for a table?
15. What is the maximum number of columns a table can have?
16. What is the maximum size per database for SQL Server Express?
17. Which TCP/IP port does the SQL Server run on? How can it be changed?
18. Define HIERARCHYID datatypes?
19. What is the NOLOCK hint?
20. What is the CHECKPOINT process in SQL Server?
21. What is SQL Profiler?
22. What is log shipping?
23. What are DMVs and DMFs used for?
24. What is a deadlock? How can you identify and resolve a deadlock?
25. What is the use of data-tier application (DAC)?
26. What is the difference between a local temporary table and a global temporary table?
27. What is a scheduled job and what is a scheduled task?
28. What is a table called, if it has neither cluster nor non-cluster index?
29. What is the difference between VARCHAR and VARCHAR (MAX) datatypes?
30. Why can there be only one clustered index per table and not more?

Clustered Index: Clustered index defines the way in which data is ordered physically on the disk. And there can only be one way in which you can order the data physically. Hence there can only be one clustered index per table.

1. Can we insert data if the clustered Index is disabled?
2. What is a covered index?

A covering index is an index that contains all of, and possibly more, the columns you need for your query.

1. What is PAD\_INDEX?

An index in SQL Server is a [B-Tree](http://en.wikipedia.org/wiki/B-tree)

* FILLFACTOR applies to the bottom layer  
  This is the leaf node/data layer in the picture below
* PAD\_INDEX ON means "Apply FILLFACTOR to all layers"  
  This is the intermediate levels in the picture below (between root and data)

This means that PAD\_INDEX is only useful if FILLFACTOR is set. FILLFACTOR determines how much free space in an data page (roughly)

1. Why does the LOGON trigger fire multiple times during a single login in SSMS?

**It happens because multiple SQL Server services are running as well as intellisense is turned on.**

1. What is Service Broker?

SQL Server Service Broker provide native support for messaging and queuing in the SQL Server Database Engine and [Azure SQL Database Managed Instance](https://docs.microsoft.com/azure/sql-database/sql-database-managed-instance-index). Developers can easily create sophisticated applications that use the Database Engine components to communicate between disparate databases, and build distributed and reliable applications.

1. What is XPath?

XPath is a graph navigation language used to select a set of nodes from an XML document. Each XPath operator selects a node-set based on a node-set selected by a previous XPath operator. For example, given a set of **<Customer>** nodes, XPath can select all **<Order>** nodes with the **date** attribute value of **"7/14/1999"**. The resulting node-set contains all the orders with order date 7/14/1999.

The XPath language is defined by the World Wide Web Consortium (W3C) as a standard navigation language. SQLXML 4.0 implements a subset of the W3C XPath specification, which is located at <http://www.w3.org/TR/1999/PR-xpath-19991008.html>.

1. What is Filestream in SQL Server?

FILESTREAM enables SQL Server-based applications to store unstructured data, such as documents and images, on the file system.

1. What is change Data Capture (CDC) in SQL Server 2008?

Change data capture records insert, update, and delete activity that is applied to a SQL Server table.

1. How do you get data from a database on another server?

Creating a linked server is the only approach that I am aware of for this to occur.

1. How do you rebuild the master database?

To restore the master database files, you need to have latest backup of the master.ldf and MDF file. Start SQL server in a single user mode and follow the below give steps with complete precision:**STEP 1:** Launch “SQL Server Configuration Manager” and then select “SQL Server 2005 Services” **STEP 2:** Go to the SQL Server instance, and perform right-click operation and select “Properties” option. **STEP 3:** Select “Advanced” tab on the “SQL Server Properties” window. Go to Startup Parameters box, and then add “-m;” prefix to the already existing parameters.

1. How is SQLCMD different from OSQL?

OSQL is outdated and one should only use SQLCMD instead

1. What is the use of the Dedicated Admin Connection (DAC)?

The Dedicated Admin Connection was built to help you connect and run basic troubleshooting queries in cases of serious performance problems.

1. What is transparent data encryption?

Technology employed by [Microsoft](https://en.wikipedia.org/wiki/Microsoft), [IBM](https://en.wikipedia.org/wiki/IBM) and [Oracle](https://en.wikipedia.org/wiki/Oracle_Corporation) to [encrypt](https://en.wikipedia.org/wiki/Encryption) [database](https://en.wikipedia.org/wiki/Database) files. TDE offers encryption at file level. TDE solves the problem of protecting [data at rest](https://en.wikipedia.org/wiki/Data_at_rest), encrypting databases both on the hard drive and consequently on [backup](https://en.wikipedia.org/wiki/Backup) media. It does not protect [data in transit](https://en.wikipedia.org/wiki/Data_in_transit) nor [data in use](https://en.wikipedia.org/wiki/Data_in_use). Enterprises typically employ TDE to solve compliance issues such as [PCI DSS](https://en.wikipedia.org/wiki/PCI_DSS) which require the protection of data at rest.

1. What is bidirectional transactional replication?

specific transactional replication topology that allows two servers to exchange changes with each other: each server publishes data and then subscribes to a publication with the same data from the other server

1. Why can’t I run TRUNCATE TABLE on a published table?

I can’t alter a published table

1. How can you validate a backup copy of your database?

BACKUP statement

1. What is Business Intelligence (BI)?
2. What is a fact table?
3. What is ETL?

Extract Transport Load; which is a procedure used for data warehousing.

1. What is PowerPivot for Excel?

Feature for Microsoft Excel which uses DAX expressions resolve to [T-SQL](https://en.wikipedia.org/wiki/T-SQL) queries.