1. What is View? What are the benefits of using views?

View can be thought of a virtual table or stored query. The data access through the view is not stored in the database. It is stored select statement. The result-set of the select statement from one or more tables forms the table return by the view. So we can create view and it does not occupy the capacity of database. View also can restrict users to specify the records of table. Combine columns from one or more tables to be looked like one table. It is used to aggregate information.

1. Can data be modified through views?

Yes

1. What is stored procedure and what are the benefits of using it?

Stored procedure is a group of Transact-SQL statements compiled into a single execution plan. Stored procedure can centralize your Transact- SQL code, increase database security and have faster execution. Use stored procedure also can reduce the network traffic and encourage code reusability.

1. What is the difference between view and stored procedure?

Views are virtual table that consist of rows and columns form different tables and databases. It is a template of rows and columns of multiple tables. You cannot put any parameters here. But stored procedure is a collection of pre-executed sql statements where you can send parameters as input and retrieve the output data. And, views can be used in the stored procedure but the stored procedure cannot be used in views.

5. What is the difference between stored procedure and functions?

* Stored procedure (sp) can return zero, single or multiple values. Function can return one value which is mandatory.
* We can use transaction in SP. But cannot use transaction in function.
* SP can have input and output parameters. Function only have input parameter.
* We can called function from sp. But cannot called sp from function.
* We cannot use sp in select/where/having statement. But can use function in select/where/having statement.
* SP allows select, insert, update, delete statement in it. But function only allows select statement in it.
* We can use exception handling using try-catch block in sp. But cannot use try-catch in function.

1. Can stored procedure return multiple result sets?

Yes

1. Can stored procedure be executed as part of SELECT Statement? Why?

No. Because procedures are not allowed in sql statements.

8. What is the difference between DELETE and TRUNCATE? Which one will have better performance and why?

* Delete is data manipulate language command, but truncate is data definition language command. Delete removes the rows from the table, we can use roll back to undo the changes. But truncate is used to remove the table permanently.
* In case of trigger, truncate doesn’t get fired. But in dml commands like delete, trigger get fired.
* You cannot write where clause in truncate, but can write conditions using where clause in delete command.
* Truncate has better performance than delete. When you use delete, all data records will be copied into rollback tablespace first. Then delete operation get performed. All this process take time. Whereas, you use truncate, it removes data directly from database. There are no copies. So truncate is faster.

9. What is Identity column? How does DELETE and TRUNCATE affect it?

Identity column is a column in table that made up of values generated by the database. It also can be called auto-increment column. One table only has one identity column. When we use truncate statement, it will remove all the rows. However, when a new record is inserted the identity value is increased from 1 which is original value. Truncate resets the identity value to the original seed value of table. Whereas, even if delete statement is used to remove all the rows, the identity value will not be reset but still incremented according to the last value used.

10. What is Transaction? What types of transaction levels are there in SQL Server?

A transaction is a single unit of work. If transaction is successful, all the data modification during the transaction are committed and become a permanent part of the database. If it encounters errors and must be canceled or rolled back, all of the data modifications will be erased. Four types: atomicity, consistency, isolation, durability

11. What is Trigger? What types of Triggers are there?

Trigger is a special type of stored procedure that get fired when a user issues an insert, update, delete on a table. Types: DDL triggers, DML triggers, CLR triggers, Logon triggers.

12. What are the scenarios to use Triggers?

Enforce integrity beyond simple referential integrity. Implement business rules. Maintain audit record of changes. Accomplish cascading updates and deletes.

13. What is the difference between Trigger and Stored Procedure?

* When you create a trigger you have to identify event and action of your trigger but when you create sp you don't identify event and action.
* Trigger is run automatically if the event is occurred but sp don't run automatically but you have to run it manually.
* Within a trigger you can call specific sp but within a sp you cannot call a trigger.
* Trigger execute implicitly whereas store procedure execute via procedure call from another block.
* Stored procedure can take the input parameters, but we can't pass the parameters as an input.