---------SQL Descriptive---------

1. What are the differences between delete statement and truncate statement?

Delete statement:

(i)   DELETE is a DML command.
(ii)   Delete can be used with indexed views.

Truncate:

(i)   TRUNCATE is a DDL command.
(ii)   Truncate cannot be used with indexed views.

TRUNCATE	DELETE
TRUNCATE is a DDL command	DELETE is a DML command
TRUNCATE is executed using a table lock and whole table is locked for remove all records.	DELETE is executed using a row lock, each row in the table is locked for deletion.
We cannot use Where clause with TRUNCATE.	We can use where clause with DELETE to filter & delete specific records.
TRUNCATE removes all rows from a table.	The DELETE command is used to remove rows from a table based on WHERE condition.
Minimal logging in transaction log, so it is performance wise faster.	It maintain the log, so it slower than TRUNCATE.
Identify column is reset to its seed value if table contains any identity column.	Identity of column keep DELETE retain the identity
To use Truncate on a table you need at least ALTER permission on the table.	To use Delete you need DELETE permission on the table.

Truncate uses the less transaction space than Delete statement.	Delete uses the more transaction space than Truncate statement.
Truncate cannot be used with indexed views	Delete can be used with indexed views

2. Define primary key and foreign key.

A primary key is a special relational database table column (or combination of columns) designated to uniquely identify all table records.

A primary key's main features are:

- It must contain a unique value for each row of data.
- It cannot contain null values.

A foreign key is a column or group of columns in a relational database table that provides a link between data in two tables.   It acts as a cross-reference between tables because it references the primary key of another table, thereby establishing a link between them.

3. What is role ?

Ans: A role is a named group of related privileges that can be granted to the user. This method makes it easier to revoke and maintain privileges.   A user can have access to several roles, and several users can be assigned the same role. Roles are typically created for a database application.

4. What is synonym?

A synonym is an alternative name for objects such as tables, views, sequences, stored procedures, and other database objects.

5. What is subquery?

A subquery is a query within another query, also known as a *nested query.* A subquery is used to return data that will be used in the main query as a condition to further restrict the data to be retrieved.

5.   What is order by clause?

The SQL ORDER BY clause is used to sort the data in ascending or descending order, based on one or more columns. Some databases sort the query results in an ascending order by default.

6. What is transaction?

A transaction is a unit of work that is performed against a database. Transactions are units or sequences of work accomplished in a logical order, whether in a manual fashion by a user or automatically by some sort of a database program.

7. What is group function? Write down types of group function.

Group functions are built-in SQL functions that operate on groups of rows and return one value for the entire group. These functions are: COUNT, MAX, MIN, AVG, SUM, DISTINCT. SQL COUNT ():   This function returns the number of rows in the table that satisfies the condition specified in the WHERE condition.

8. Write down the advantage of views?

To restrict data access

To make complex queries easy

To provide data independence

To present different views of the same data

(i) views restrict access to the data because it displays selected columns from the table.

(ii) Views can be used to make simple queries to retrieve the results of complicated queries. For example, views can be used to query information from multiple tables without the user knowing how to write a join statement.

(iii) Views provide data independence for ad hoc users and application programs. One view can be used to retrieve data from several tables.

(iv) Views provide groups of users access to data according to their particular criteria.

9. What is schema?

A *schema* is a collection of database objects (as far as this hour is concerned—tables) associated with one particular database username. This username is called the *schema owner*, or the owner of the related group of objects.   You may have one or multiple schemas

In a database.