WORKSHEET-7 SQL

1. B

2. B, C

3. C

4. C

5. C

6. C

7. C

8. B

9. B

10. A

11. **What are joins in SQL?**

Joins in SQL are used to combine rows from two or more tables based on a related column between them. For example, if a "users" table and an "orders" table have a common "user_id" column, a join can be used to combine the rows from these tables where the "user_id" column in the "users" table matches the "user_id" column in the "orders" table. The resulting table will contain all columns from both the "users" table and the "orders" table, with the rows being matched based on the join condition.

12. **What are the different types of joins in SQL?**

INNER JOIN: returns only the rows that have matching values in both tables.

LEFT JOIN (or LEFT OUTER JOIN): returns all the rows from the left table and the matching rows from the right table. If there is no match, NULL values are returned for right table's columns.

RIGHT JOIN (or RIGHT OUTER JOIN): returns all the rows from the right table and the matching rows from the left table. If there is no match, NULL values are returned for left table's columns.

FULL OUTER JOIN: returns all rows from both tables, and if there is no match, NULL values are returned for non-matching columns of either left or right table.

CROSS JOIN: returns the Cartesian product of the two tables, meaning it will combine each row of the first table with each row of the second table.

SELF JOIN: a table is joined with itself.

NATURAL JOIN: a join that returns only the rows that have matching values in both tables based on column names.

13. **What is SQL Server?**

SQL Server is a relational database management system (RDBMS) developed by Microsoft. It is primarily used for storing and retrieving data for software applications, and it supports a wide variety of data types and data manipulation operations. SQL Server is designed to work with the Structured Query Language (SQL), which is used to interact with the database and perform tasks such as inserting, updating, and retrieving data. It provides various features such as indexing, data warehousing, reporting, and data mining. SQL Server also includes a number of advanced features such as full-text search,

replication, and support for XML and spatial data. It also offers both on-premises and cloud-based versions called SQL Server and Azure SQL respectively, that allows to scale up or down as per the needs.

14. **What is primary key in SQL?**

A primary key in SQL is a column or set of columns in a table that uniquely identifies each row in the table. It is used to enforce the integrity of the data in the table and ensure that there are no duplicate values. A primary key column cannot contain null values and must have a unique value for each row in the table. A table can have only one primary key, but that primary key can consist of multiple columns. For example, if a "Users" table has a primary key consisting of both "user_id" and "email" columns, it guarantees that no two users can have the same user_id and email.

A primary key can also be used to establish relationships between tables through a process called foreign key constraints. This allows data from one table to be linked to data in another table.

15. **What is ETL in SQL?**

ETL stands for Extract, Transform, Load. It is a process used to move data from one or more data sources (such as databases, flat files, or other systems) into a destination data store, such as a data warehouse or a data mart. SQL is widely used to perform ETL process because it is a powerful and flexible language that can be used to extract, transform, and load data from a wide variety of sources. Many ETL tools and frameworks, such as Microsoft SQL Server Integration Services (SSIS) or Informatica, use SQL as the primary language for extracting, transforming, and loading data.