8) What is the significance of “%” and “\_” operators in the LIKE statement?

* In SQL, the LIKE statement is used to search for a specified pattern in a column. The % and \_ operators are wildcards used in conjunction with LIKE to match patterns.
* % allows you to match **any sequence of characters** (including none).
* allows you to match **exactly one character**.

9) Explain normalization in the context of databases.

Normalization is the process of organizing the data in a relational database to reduce redundancy and improve data integrity. The primary goal of normalization is to structure the database in such a way that it avoids unnecessary repetition of data, minimizes the potential for data anomalies, and ensures that the relationships between the tables are logical and well-defined.

10) What does a join in MySQL mean?

A **JOIN** in MySQL is an operation used to combine rows from two or more tables based on a related column between them. Joins are fundamental to relational databases as they allow you to retrieve data from multiple tables in a single query.

In a relational database, tables are often linked via common columns, typically through foreign

key relationships. A join allows you to retrieve related data from these tables, creating a result set that combines the data from each table.

11) 19.What do you understand about DDL, DCL, and DML in MySQL?

DDL :- Data definition language

EX :- create, alter, rename, drop

DCL :- Data control language.

EX :- Grant & Revoke.

DML :- Data Manipulation language .

EX :- Insert, Delete & Update

12) What is the role of the MySQL JOIN clause in a query, and what are some common types of joins?

**Role of the MySQL JOIN Clause:**

* **Combining Data**: The JOIN clause enables you to combine columns from multiple tables into a single result set.
* **Establishing Relationships**: It allows you to establish relationships between tables, typically through foreign key references, so that you can query related data from different tables.
* **Efficient Data Retrieval**: By joining tables, you can avoid redundancy and minimize data duplication by storing related data in separate tables.

**Common Types of Joins in MySQL:**

1. **INNER JOIN**:- Returns rows that have matching values in both tables.
2. **LEFT JOIN:- Returns all rows from the left table, and matching rows from the right table (or NULL if no match).**
3. **FULL JOIN:- Returns all rows when there is a match in either the left or right table (simulated in MySQL).**
4. **CROSS JOIN:- Returns the Cartesian product of both tables (every possible combination of rows).**
5. **SELF JOIN:- Joins a table with itself, typically used for hierarchical data.**