1-**SQL query to copy the structure of another table:**

```
CREATE TABLE new_table AS

SELECT * FROM existing_table WHERE 1 = 0;
```

This query creates a new table (new_table) with the same structure as existing_table but without copying any data.

2-**Get current date:**

```
SELECT CURRENT_DATE AS current_date;
```

3-Alternative to DISTINCT for getting distinct records:

To get distinct records without using DISTINCT, you can use the GROUP BY clause.

```
SELECT column1, column2, ... FROM your_table GROUP BY column1, column2, ...;
```

4-What is table, field, record:

- **Table:** A collection of data organized in rows and columns.
- **Field (or Column):** A single piece of data in a table, analogous to a variable in programming.
- **Record (or Row):** A complete set of related fields that represents a single item in the table.

5-Aggregate functions:

SQL aggregate functions perform a calculation on a set of values and return a single value. Examples include SUM, AVG, COUNT, MIN, and MAX.

6-Commands:

SQL commands include SELECT (retrieve data), INSERT (insert data), UPDATE (modify data), DELETE (delete data), and CREATE (create objects like tables).

7-Different types of relationships in SQL:

- **One-to-One:** Each record in the first table is related to one and only one record in the second table.
- **One-to-Many:** Each record in the first table can be related to multiple records in the second table.
- **Many-to-Many:** Many records in the first table can be related to many records in the second table.

8-What is a query:

A query is a request for data or information from a database. In SQL, queries are written using

statements like SELECT, INSERT, UPDATE, and DELETE.

9-How to get remainder:

You can use the modulo operator % to get the remainder in SQL.

```
SELECT 10 % 3 AS remainder;
```

10-Disadvantages of deleting a whole table:

Deleting a whole table removes all data and the table structure. This can lead to data loss, and if not carefully executed, it might be irreversible.

11-Difference between NULL and zero:

- **NULL:** Represents the absence of a value or unknown data.
- **Zero:** Is a numeric value, representing the number 0.

12-UNION, UNION ALL, MINUS, INTERSECT:

- **UNION:** Combines the result sets of two SELECT statements, removing duplicate rows.
- **UNION ALL:** Similar to UNION, but retains all rows, including duplicates.
- **MINUS (or EXCEPT):** Returns distinct rows from the left SELECT statement that are not in the right SELECT statement.
- **INTERSECT:** Returns distinct rows that are common to both SELECT statements.

13-ACID properties:

ACID stands for Atomicity, Consistency, Isolation, and Durability – a set of properties that guarantee database transactions are processed reliably.

14-Normalization and denormalization:

- **Normalization:** Organizing data to reduce redundancy and dependency.
- **Denormalization:** Intentionally introducing redundancy to improve query performance.

15-Indexing:

Indexing is a database optimization technique to speed up query performance by creating indexes (data structures) on columns.

16-Clustered and non-clustered indexing:

- **Clustered Index:** Determines the physical order of data rows in a table.
- **Non-clustered Index:** Does not alter the physical order of the table, but provides a separate structure for fast data retrieval.

17-View:

A view is a virtual table based on the result of a SELECT query. It allows users to query the view as if it were a table, hiding the complexity of the underlying tables.

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