Q1:-

The software used to store, manage, query, and retrieve data stored in a relational database is called a **relational database management system** (RDBMS). The RDBMS provides an interface between users and applications and the database, as well as administrative functions for managing data storage, access, and performance

Advantages of DBMS over File system :

- Data redundancy and inconsistency – Redundancy is the concept of repetition of data i.e. each data may have more than a single copy. ...
- Data sharing – ...
- Data concurrency – ...
- Data searching – ...

- Data integrity – ...
- System crashing – ...
- Data security –

Q2:-
ACID is a concept (and an acronym) that refers to the four properties of a transaction in a database system, which are: **Atomicity, Consistency, Isolation and Durability**.

Q3:-

Normalization is **the process of organizing data in a database**. This includes creating tables and establishing relationships between those tables according to rules designed both to protect the data and to make the database more flexible by eliminating redundancy and inconsistent dependency.

Q4:-

What is DDL?

Data Definition Language helps you to define the database structure or schema. Let’s learn about DDL commands with syntax.

Five types of DDL commands in SQL are:

CREATE

CREATE statements is used to define the database structure schema:

Syntax:

CREATE TABLE TABLE_NAME (COLUMN_NAME DATATYPES[,....]);

For example:

Create database university; Create table students; Create view for_students;

DROP

Drops commands remove tables and databases from RDBMS.

Syntax

DROP TABLE ;

For example:

Drop object_type object_name;
Drop database university; Drop

table student;

ALTER

Alters command allows you to alter the structure of the database.

Syntax:

To add a new column in the table

ALTER TABLE table_name ADD column_name COLUMN-

definition;

To modify an existing column in the table:

ALTER TABLE MODIFY(COLUMN DEFINITION....);

For example:

Alter table guru99 add subject varchar;

TRUNCATE:

This command used to delete all the rows from the table and free the space containing the table.

Syntax:

TRUNCATE TABLE table_name;

Example:

TRUNCATE table students;

What is Data Manipulation Language?

Data Manipulation Language (DML) allows you to modify the database instance by inserting, modifying, and

deleting its data. It is responsible for performing all types of data modification in a database.

There are three basic constructs which allow database program and user to enter data and

information are:

Here are some important DML commands in SQL:

- INSERT
- UPDATE
- DELETE

What is DCL?

DCL (Data Control Language) includes commands like GRANT and REVOKE, which are useful to give “rights & permissions.” Other permission controls

parameters of the database system.

Examples of DCL commands:

Commands that come under DCL:

- Grant

- Revoke

Grant:

This command is use to give user access privileges to a database.

What is TCL?

Transaction control language or TCL commands deal with the transaction within the database.

Commit

This command is used to save all the transactions to the database.

Syntax:

Commit;

For example:

DELETE FROM Students WHERE RollNo =25; COMMIT;

Rollback

Rollback command allows you to undo transactions that have not already been saved to the database.

What is DQL?

Data Query Language (DQL) is used to fetch the data from the database. It uses only one command:

SELECT:

This command helps you to select the attribute based on the condition described by the WHERE clause.

Syntax:

SELECT expressions
FROM TABLES

WHERE conditions;

Q5:-
Difference between Primary Key and Unique Key

Primary KeyUnique KeyUnique identifier for rows of a tableUnique identifier

for rows of a table when primary key is not presentCannot be NULLCan be NULLOnly one primary key can be present in a tableMultiple Unique Keys can be present in a tablepresent in a tablepresent in a tableSelection using

primary key creates clustered indexSelection using unique key creates non-clustered index