MODULE: 5 (Database)

• What do you understand By Database

A database is **information that is set up for easy access, management and updating**. Computer databases typically store aggregations of data records or files that contain information, such as sales transactions, customer data, financials and product information.

• What is Normalization?

The basic objective of normalization is to reduce redundancy which means that information is to be stored only once. Storing information several times leads to wastage of storage space and increase in the total size of the data stored. Relations are normalized so that when relations in a database are to be altered during the life time of the database, we do not lose information or introduce inconsistencies.

• What is Difference between DBMS and RDBMS?

DBMS stands for Database Management System, and RDBMS is the acronym for the Relational Database Management system. **In DBMS, the data is stored as a file, whereas in RDBMS, data is stored in the form of tables**.

• What is MF Cod Rule of RDBMS Systems?

1. Information represented at the logical level in tables.

2. Data is determined by table, primary key, and column.

3. Missing information is modeled as null values.

4. Metadata is part of the database.

5. Single language for all tasks in DBMS.

6. Views and tables must change simultaneously.

7. Single operations for retrieve, insert, delete, update.

8. Operations independent of physical storage and access.

9. Database modifiable without affecting applications.

10. Constraints are part of database.

11. DML independent of physical layer (distributed, etc.)

12. Row-processing obeys same rules as set-processing.

• What do you understand By Data Redundancy?

Data redundancy **occurs when the same piece of data exists in multiple places**, whereas data inconsistency is when the same data exists in different formats in multiple tables. Unfortunately, data redundancy can cause data inconsistency, which can provide a company with unreliable and/or meaningless information.

A common example of data redundancy is **when a name and address are both present in different columns within a table**. If the link between these data points is defined in every single new database entry it would lead to unnecessary duplication across the entire table.

• What is DDL Interpreter?

Data Definition Language (DDL) is **a subset of SQL.** **It is a language for describing data and its relationships in a database**. You can generate DDL in a script for database objects to: Keep a snapshot of the database structure. Set up a test system where the database acts like the production system but contains no data.

• What is DML Compiler in SQL?

DML stands for Data Manipulation Language. DML compiler **translates the DML statements which are there in a query language into the low-level instructions which the query evaluation engine understands easily**.

• What is SQL Key Constraints writing an Example of SQL Key Constraints

Constraints are the rules that we can apply on the type of data in a table. That is, we can specify the limit on the type of data that can be stored in a particular column in a table using constraints. The available constraints in SQL are: NOT NULL: This constraint tells that we cannot store a null value in a column.

• What is save Point? How to create a save Point write a Query?

A SAVEPOINT is a point in a transaction in which you can roll the transaction back to a certain point without rolling back the entire transaction. Syntax for Savepoint command: **SAVEPOINT SAVEPOINT\_NAME;** This command is used only in the creation of SAVEPOINT among all the transactions.

• What is trigger and how to create a Trigger in SQL?

A trigger is a stored procedure in database which automatically invokes whenever a special event in the database occurs For example, a trigger can be invoked when a row is inserted into a specified table.

Syntax:

create trigger [trigger\_name] [before | after] {insert | update | delete} on [table\_name] [for each row] [trigger\_body]