1, What is a database? What are the different types of databases?

A database is a structured collection of data stored electronically for easy access and management.

relational (Eg My sql) - stores data

NO SQL (Eg MONgo DB) - handles unstructured data

In, Memory object oriented and distributed for speed, object storage, and large scale systems

2, What is relational database? how is different from non - relational databases?

A relational database stores data in structure tables with row and columns, using SQL to manage

It enforce relationship between table using keys

Non-relational database (NO SQL) store data in flexible formats like documents, key value pairs or graphs

Relational database are ideal for structured data and complex queries.

Non Relational ones are better for unstructured data and horizontally scalability

3. What is SQL? What are Major components

SQL - structured query language

It is standard language used to manage and manipulate relational data bases

Components are :-

DDL => Data definition Language (Eg, create, Alter)

DML => Data Manipulation Language (Eg select, Insert, update, delete)

DCL & TCL => For controlling access and Transaction (Eg) Grant, Commit

4) What are the different types of SQL Commands?
Explain briefly

SQL commands are based on their purpose
in database operation

DDL (data definition language) - define database structure
Eg - CREATE, ALTER, DROP

DML (data manipulation language) - Mange data inside
tables

Eg :- SELECT, INSERT, UPDATE, DELETE

DCL - (data control language) - control user access
(Eg) GRANT, REVOKE

TCL - (transaction control language) - Mange transaction
[Eg] COMMIT, ROLLBACK,
SAVE POINT

5. What is the role of SQL in DBMS

The role of SQL in a DBMS is act as the language for interacting with a databases

It allow users to create, read, update and delete data (CRUD operation)

6. how do you install and set up SQL on system

— Download My SQL installer

— Run the installer

— Install required components
   it installs My SQL server, work bench, Shell and other tools

— Configure My SQL server
      - choose port (default 3306)
      - set root password
      - choose Authentication method

— Finish & start service

7) What is the syntax for creating database and Tables in SQL ?

CREATE DATABASE database_name;

CREATE TABLE table_name (
    column 1 data type constraints,
    column 2 data type constraints,
    - - . - -
);

8) How do you insert a single and Multiple records into table ?

INSERT INTO table_name (column 1, column 2...)
Values (value 1, value 2, - - -);

INSERT INTO table_name (colum 1, colum 2,)
Values
    (value 1, value 2, ...),
    (value 3, value 4, - . .),
    . . . . ;

q, What are difference between DDL, DML, DCL
TCL Commands

Command	Purpose	Example	Affect data or structure
DDL (data definition Language)	defines or changes structure	CREATE, ALTER, DROP	Structure
DML (data Manipulation language)	handles data inside Tables	SELECT INSERT UPDATE DELETE	Data
DCL (data control Language)	Controls access and permission	GRANT REVOKE	ACCESS Rights
TCL (Transaction Control Language)	Manages Transactions in SQL	ROLLBACK, SAVE POINT	Transaction State

10) What are some common SQL data types

– Here are some common SQL data Types

NUMERIC Types:-

INT
FLOAT
DOUBLE
DECIMAL

STRING Types:-

CHAR (m)
VARCHAR (m)
TEXT

DATE and TIME type:-

DATE
TIME
DATE TIME / TIME STAMP

OTHER Types:-
BOOLEAN / BIT