**1)What is RDBMS.**

* **RDBMS (Relational Database Management System)** is a type of **database management system** that **stores data in the form of tables (rows and columns)**.  
  It uses **relationships** between tables through **primary keys** and **foreign keys** to **organize and manage data efficiently**.

**2) What is SQL.**

* **SQL (Structured Query Language)** is a **standard programming language** used to **store, manage, and retrieve data** in a **relational database**.  
  It allows users to **create tables**, **insert data**, **update records**, **delete data**, and **fetch information** from databases efficiently.

**3) Write SQL Commands**

* DDL (Data Definition Language): CREATE, ALTER, DROP, TRUNCATE, RENAME
* DML (Data Manipulation Language): INSERT, UPDATE, DELETE
* DQL (Data Query Language): SELECT
* TCL (Transaction Control Language): Transaction Control Language

**4) What is join?**

* A **JOIN** in SQL is used to **combine data from two or more tables** based on a **related column**, such as a **primary key** and **foreign key**.  
  It helps to fetch **meaningful information** by connecting related records stored in different tables.

**5) Write type of joins.**

* INNER JOIN → Strict matching.
* LEFT/RIGHT JOIN → Include unmatched data from one side.
* FULL JOIN → Include all data from both sides.
* CROSS JOIN → For combinations.

**6) How Many constraint and describes it self.**

1. NOT NULL: Ensures that a column **cannot have NULL values**.

2. UNIQUE: Ensures that **all values in a column are different** (no duplicates).

3. PRIMARY KEY: Uniquely identifies **each record in a table**.   
• Combines **NOT NULL + UNIQUE**.

4. FOREIGN KEY: Maintains **referential integrity** by linking two tables.   
It ensures a value in one table matches a value in another table's **Primary Key**.

5. CHECK: Ensures that **data meets a specific condition** before being inserted or updated.

6. DEFAULT: Provides a **default value** for a column when no value is specified.

**7) Difference between RDBMS vs DBMS.**

|  |  |  |
| --- | --- | --- |
| **Aspect** | **DBMS (Database Management System)** | **RDBMS (Relational Database Management System)** |
| Definition | DBMS is software used to store and manage data in databases | RDBMS is an advanced type of DBMS that stores data in **tables with relationships**. |
| Data Storage | Stores data as **files** or **hierarchical structures**. | Stores data in the **form of tables (rows and columns)**. |
| Relationships | Does **not support relationships** between data. | **Supports relationships** between tables using **foreign keys**. |
| Data Integrity | No concept of constraints like primary key, foreign key. | Maintains **data integrity** using **keys and constraints**. |
| Data Redundancy | Higher redundancy because no relationships exist. | Reduced redundancy due to **normalization**. |
| Security | Basic security features. | Strong **security** with role and permission management. |

**8) What is an SQL alias?**

* An **SQL Alias** is a **temporary name** given to a **table or column** to make queries **simpler, shorter, and more readable**.  
  It **does not change the actual name** in the database; it is only used **while running the query**.

**9) Write a query to create the table in Structured Query Language.**

* CREATE TABLE Product (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(50),

Price DECIMAL(10,2),

SellerID INT,

FOREIGN KEY (SellerID) REFERENCES Seller(SellerID)

);

**10) Write a query to insert data into table.**

* INSERT INTO Seller (SellerID, SellerName, Location) VALUES

(1, 'John Traders', 'New York'),

(2, 'Mansi Electronics', 'Los Angeles'),

(3, 'Elite Fashion', 'Chicago');

**11) Write a query to update data into table with validations.**

* UPDATE Product

SET Price = 22000

WHERE ProductID = 102;

**12) Write a query to delete data from table with validations.**

* DELETE FROM Product

WHERE ProductID = 103;

**13) Write a query to insert new column in existing table.**

* ALTER TABLE Product

ADD Stock INT;

**14) Write a query to drop table and database.**

* For Table

DROP TABLE Product;

* For Database

DROP DATABASE ShopDB;

**15) Write a query to find max and min value from table.**

* For Min Value

SELECT MIN(Price) AS MinPrice

FROM Product;

* For Max Value

SELECT MAX(Price) AS MaxPrice

FROM Product;

**16) Create two tables named Seller and Product apply foreign key in product table Fetch data from both table using different joins.**

* CREATE TABLE Seller (

SellerID INT PRIMARY KEY,

SellerName VARCHAR(50),

Location VARCHAR(50)

);

INSERT INTO Seller (SellerID, SellerName, Location) VALUES

(1, 'John Traders', 'New York'),

(2, 'Mansi Electronics', 'Los Angeles'),

(3, 'Elite Fashion', 'Chicago');

CREATE TABLE Product (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(50),

Price DECIMAL(10,2),

SellerID INT,

FOREIGN KEY (SellerID) REFERENCES Seller(SellerID)

);

INSERT INTO Product (ProductID, ProductName, Price, SellerID) VALUES

(101, 'Laptop', 55000.00, 2),

(102, 'Mobile', 20000.00, 2),

(103, 'Shirt', 1500.00, 3),

(104, 'Shoes', 3000.00, 3),

(105, 'Tablet', 25000.00, 1);

INNER JOIN

SELECT Product.ProductID, Product.ProductName, Seller.SellerName, Seller.Location

FROM Product

LEFT JOIN

SELECT Product.ProductID, Product.ProductName, Seller.SellerName

FROM Product

LEFT JOIN Seller ON Product.SellerID = Seller.SellerID;

RIGHT JOIN

SELECT Seller.SellerID, Seller.SellerName, Product.ProductName

FROM Product

RIGHT JOIN Seller ON Product.SellerID = Seller.SellerID;

FULL JOIN

SELECT Seller.SellerID, Seller.SellerName, Product.ProductID, Product.ProductName

FROM Seller

FULL OUTER JOIN Product ON Seller.SellerID = Product.SellerID;

**17) What is API Testing?**

* **API Testing** is a type of software testing that focuses on **verifying and validating Application Programming Interfaces (APIs)**. It checks whether APIs are **working correctly, securely, and efficiently**.

In API Testing, testers send **requests** to the API and verify the **responses** without using a graphical user interface (GUI). Instead, it is tested at the **backend or server level**.

**18) Types of API Testing.**

* Functional Testing
* Load Testing
* Security Testing
* Validation Testing
* Error Handling Testing
* Unit Testing
* Integration Testing

**19) What is Responsive Testing?**

* **Responsive Testing** is a type of software testing used to check whether a website or application **adapts correctly to different screen sizes, devices, and browsers**.

It makes sure that the **layout, images, text, and functionality** work smoothly on desktops, laptops, tablets, and mobile phones without breaking or looking misaligned.

**20) Which types of tools are available for Responsive Testing**

* Browser Developer Tools :  Google Chrome DevTools, Firefox Responsive Design Mode, Microsoft Edge DevTools
* Online Tools :  Responsinator, Screenfly, Am I Responsive?, BrowserStack Responsive Tool
* Cross-Browser Testing :  BrowserStack, LambdaTest, Sauce Labs, Kobiton
* Automation Tools :  Selenium with WebDriver, Appium, Cypress, Percy (for visual testing)

**21) What is the full form of .ipk, .apk**

* .ipk : **iOS App Store Package** (or **iPhone Application**)
* .apk : **Android Package Kit** (sometimes called Android Application Package)

**22) How to create step for to open the developer option mode ON?**

1. Open the **Settings** app on your phone.

2. Scroll down and tap **About Phone**.

3. Find and tap **Build Number** (sometimes under Software Information).

4. Tap the **Build Number** **7 times continuously**.

5. Enter your phone’s **PIN/Pattern/Password** if asked.

6. A message will appear: “You are now a developer!”

7. Go back to **Settings → System**, and you will see **Developer Options**.

8. Tap **Developer Options** and **toggle it ON**.