1. **Question 1** ("What is conditional statement in VB Script?") is repeated twice.
2. **Question 14** ("Discuss the usage of date functions in VB script.") is repeated.
3. **Question 13** ("Describe about VB script operators.") is repeated.
4. **Question 14** ("Discuss various functions available in VB script.") is repeated.
5. **Question 13** ("Discuss about Error Handling in ASP.NET.") is repeated.
6. **Question 15** ("Discuss various Looping statement in JavaScript.") is repeated.
7. **Question 16** ("Explain about cookies in JavaScript.") is repeated.
8. **Question 15** ("Explain user defined objects in JavaScripts.") is repeated.
9. **Question 19** ("How to connect and manipulate data in a database?") is repeated.
10. **Question 24** ("List the data types supported in JavaScript. Explain with examples.") is repeated.
11. **Question 13** ("Write the significance of SSL certificate.") is repeated.

1. What is conditional statement in VB Script?

- Conditional statements allow the execution of code based on conditions.
- Commonly used conditional statement: `If...Then`.
- Supports the `Else` and `ElseIf` clauses for alternative actions.
- Evaluates logical expressions like `x > 5` or `y == "yes"`.
- The `If` statement can also be used with multiple conditions using logical operators (`And`, `Or`).
- Conditional statements help in making decisions during program execution.
- Example:

```vbscript
If x > 10 Then
    MsgBox "x is greater than 10"
Else
    MsgBox "x is less than or equal to 10"
End If
```

2. Explain about the data types supported by JavaScript.

- **Primitive data types**: `Number`, `String`, `Boolean`, `undefined`, `null`.
- **Object types**: `Object`, `Array`, `Function`, `Date`, `RegExp`.
- JavaScript is dynamically typed, meaning types are assigned automatically.
- `Number`: Represents both integer and floating-point values.
- `String`: Represents sequences of characters enclosed in quotes.
- `Boolean`: Represents `true` or `false` values for logical operations.
- Example of `Number`:

```javascript
let num = 10; // Number data type
```

3. Explain about arrays and its types.

- Arrays store multiple values in a single variable, indexed by numbers.
- **Types**:
  - **Indexed Arrays**: Stores values at indexed positions (e.g., `[1, 2, 3]`).
  - **Associative Arrays**: JavaScript doesn't have traditional associative arrays, but objects can act as key-value pairs (e.g., `{key: "value"}`).
- Arrays are dynamic and can hold elements of any type.
- Can use `Array.length` to get the size of the array.
- Example:

```javascript
let arr = [1, 2, 3]; // Indexed Array
let obj = {name: "John", age: 30}; // Object as associative array
```

4. Briefly Explain about how to include function to a JavaScript program.

- A function in JavaScript is defined using the `function` keyword.
- Functions can accept parameters and return values.
- Functions help in organizing code into reusable blocks.
- Functions are called by their name, followed by parentheses.
- Example:

```javascript
function greet(name) {
    alert("Hello, " + name);
}
greet("John");  // Calling the function
```

5. Write a JavaScript program to display the browser object.

```javascript
alert("Browser Name: " + navigator.appName);
alert("Browser Version: " + navigator.appVersion);
alert("Browser Language: " + navigator.language);
alert("Browser User-Agent: " + navigator.userAgent);
```

6. Discuss about CheckBox. List control with examples.

- A `CheckBox` is a UI element that allows users to select or deselect an option.
- It is used for multiple selections where more than one option can be selected.
- Checkboxes are created using the `<input>` HTML element with `type="checkbox"`.
- Example:

```html
<input type="checkbox" id="option1"> Option 1<br>
<input type="checkbox" id="option2"> Option 2
```

7. Explain how OLEDB connection class is used to establish a database connection.

- OLEDB (Object Linking and Embedding, Database) allows access to a wide range of databases.
- OLEDB provides a standard interface to access relational and non-relational data.
- Example to connect to a database using OLEDB:

```vbscript
Dim conn
Set conn = CreateObject("ADODB.Connection")
conn.Open "Provider=Microsoft.Jet.OLEDB.4.0;Data Source=C:\path\to\your\database.mdb"
```

- It can interact with SQL Server, Excel files, and other data sources.
- OLEDB provides methods for executing commands and retrieving data.
- Always close the connection using `conn.Close` .
- OLEDB works with ADO (ActiveX Data Objects) to manage connections and queries.

8. Describe about VB Script operators.

- VBScript operators are used to perform operations on variables and values.
- Types of operators: Arithmetic, Comparison, Logical, and String.
- **Arithmetic Operators**: `+`, `-`, `*`, `/`, `%` .
- **Comparison Operators**: `=`, `<`, `>`, `<=`, `>=`, `<>` (not equal).
- **Logical Operators**: `And`, `Or`, `Not` .
- **String Operators**: `&` (concatenation).
- Example:

```vbscript
Dim x, y
x = 10
y = 20
MsgBox x + y ' Output: 30
```

9. Discuss the usage of date functions in VB Script.

- VBScript provides several built-in date functions for working with date and time.
- Common date functions include:
  - `Date()` : Returns the current date.
  - `Now()` : Returns the current date and time.
  - `DateAdd(interval, number, date)` : Adds a specified interval to a date.
  - `DateDiff(interval, date1, date2)` : Returns the difference between two dates.
  - `Day()`, `Month()`, `Year()` : Extracts the respective part of the date.
- Example:

```vbscript
MsgBox Date()    ' Displays today's date
MsgBox Year(Now())    ' Displays the current year
```

10. List the properties of Browser object. Explain.

- The `Browser` object provides information about the browser and system environment.
- Properties:
  - `appName` : Returns the browser's name (e.g., `Netscape` or `Microsoft Internet Explorer`).
  - `appVersion` : Returns the version of the browser.

- `platform` : Returns the platform the browser is running on (e.g., `Win32`).

- `language` : Returns the language of the browser (e.g., `en-US`).

- `userAgent` : Returns the complete user-agent string.

- `cookieEnabled` : Returns `true` or `false` depending on whether cookies are enabled.

- `javaEnabled` : Returns `true` or `false` depending on whether Java is enabled.

11. What is meant by Event Handling? Explain.

- Event handling refers to responding to user actions such as clicks, keypresses, etc.

- In JavaScript, events are triggered when a user interacts with an element.

- Common events include `onclick` , `onmouseover` , `onkeydown` , etc.

- JavaScript functions are assigned as event handlers to handle these events.

- Example:

```html
<button onclick="alert('Button clicked!')">Click me</button>
```

12. What is E-mail? Discuss briefly.

- **Email (Electronic Mail)** allows users to send and receive messages over the internet.
- It involves the use of an email client or service (like Gmail, Outlook) to send and read messages.
- Email messages can include text, attachments, and multimedia.
- An email address consists of two parts: local part (before the `@`) and domain (after the `@`).
- Email protocols like SMTP (Simple Mail Transfer Protocol) are used for sending, and IMAP/POP are used for receiving emails.
- Emails are stored on mail servers and can be accessed from multiple devices.
- Email systems have security measures like encryption to protect privacy.

13. List out the various operators in JavaScript.

- **Arithmetic Operators**: `+`, `-`, `*`, `/`, `%`, `++`, `--`.
- **Assignment Operators**: `=`, `+=`, `-=`, `*=`, `/=`, `%=`.
- **Comparison Operators**: `==`, `===`, `!=`, `!==`, `>`, `<`, `>=`, `<=`.
- **Logical Operators**: `&&` (AND), `||` (OR), `!` (NOT).
- **Ternary Operator**: `condition ? expr1 : expr2`.
- **Bitwise Operators**: `&`, `|`, `^`, `~`, `<<`, `>>`.
- **String Operators**: `+` (concatenation).

14. Describe about working with IIS.

- **IIS (Internet Information Services)** is a web server developed by Microsoft.
- It is used for hosting websites and web applications on Windows servers.
- IIS supports various protocols, including HTTP, HTTPS, FTP, and more.
- It provides features like security management, logging, and error handling.
- IIS allows administrators to configure web server settings and monitor traffic.
- IIS integrates with ASP.NET for hosting .NET-based web applications.
- It also supports PHP, Node.js, and other server-side technologies.

15. Discuss various functions available in VB Script.

- **MsgBox**: Displays a message box with information.

```vbscript
MsgBox "Hello, World!"
```

- **Len**: Returns the length of a string.

```vbscript
MsgBox Len("Hello")  ' Output: 5
```

- **UCase**: Converts a string to uppercase.

```vbscript
MsgBox UCase("hello")  ' Output: HELLO
```

- **LCase**: Converts a string to lowercase.
- **Date**: Returns the current date.
- **Now**: Returns the current date and time.
- **IsDate**: Checks if a value is a valid date.

16. Explain various Looping statements in JavaScript.

- **for loop**: Used to run a block of code a specified number of times.

```javascript
for (let i = 0; i < 5; i++) {
    console.log(i);
}
```

- **while loop**: Runs as long as the specified condition is true.

```javascript
let i = 0;
while (i < 5) {
    console.log(i);
    i++;
}
```

- **do...while loop**: Similar to the `while` loop but guarantees at least one execution.

```javascript
let i = 0;
do {
    console.log(i);
    i++;
} while (i < 5);
```

- **for...in loop**: Used for iterating over object properties.
- **for...of loop**: Used for iterating over array values.

17. Explain about cookies in JavaScript.

- **Cookies** are small pieces of data stored by the browser to remember information about the user.
- JavaScript can create, read, and delete cookies using `document.cookie`.
- Cookies are commonly used for session management, user preferences, and tracking.
- Cookies have an expiry date, which determines how long they will be stored.
- Example of setting a cookie:

Copy code

```javascript
document.cookie = "username=JohnDoe; expires=Thu, 1 Jan 2025 12:00:00 UTC; path=/";
```

- Cookies are sent with every HTTP request to the domain they belong to.

- Some browsers provide settings to block or manage cookies for privacy reasons.

18. Briefly Explain user-defined objects in JavaScript.

- User-defined objects in JavaScript are objects created by the developer, which are not part of the JavaScript predefined objects.

- They are defined using object literals or constructor functions.

- Object literals are used for creating single instances, while constructor functions can be used to create multiple objects.

- Example using object literal:

```javascript
let person = {
    name: "John",
    age: 30,
    greet: function() { alert("Hello!"); }
};
person.greet();  // Outputs "Hello!"
```

- Example using constructor function:

```javascript
function Person(name, age) {
    this.name = name;
    this.age = age;
    this.greet = function() { alert("Hello!"); };
}
let person1 = new Person("John", 30);
person1.greet();  // Outputs "Hello!"
```

19. How to connect and manipulate data in a database?

- **Connection**: First, establish a connection to the database using connection strings.

- Example (using OLEDB in VBScript):

```vbscript
Dim conn Set conn = CreateObject("ADODB.Connection")
conn.Open "Provider=Microsoft.Jet.OLEDB.4.0;Data Source=C:\db.mdb"
```

- **Query Execution**: Use `Execute` method to run SQL queries (SELECT, INSERT, UPDATE, DELETE).

- Example:

```vbscript
conn.Execute "INSERT INTO Users (Name, Age) VALUES ('John', 30)"
```

- **Recordset**: Use `Recordset` object to retrieve and manipulate data.

```vbscript
```

```vbscript
Dim rs
Set rs = conn.Execute("SELECT * FROM Users")
Do Until rs.EOF
    MsgBox rs.Fields("Name").Value
    rs.MoveNext
Loop
```

- **Close Connection**: Always close the connection after the operations are done.

```vbscript
vbscript                                                      Copy code

conn.Close
```

20. Write short notes on Error Handling in ASP.NET.

- ASP.NET provides several mechanisms for handling errors: `Try...Catch`, `Finally`, and custom error pages.

- **Try...Catch**: Encapsulates code that may throw exceptions.

```csharp
csharp

try {
    // Code that may cause error
}
catch (Exception ex) {
    // Handle error
}
finally {
    // Code that always runs
}
```

- **Global Error Handling**: In the `Global.asax` file, the `Application_Error` method can be used for handling application-wide errors.

- **Custom Error Pages**: Set custom error pages for specific HTTP status codes (e.g., 404, 500).

```xml
xml                                                           Copy code

<customErrors mode="On" defaultRedirect="ErrorPage.aspx"> <error statusCode="404"
redirect="NotFound.aspx" /> </customErrors>
```

21. Write the significance of SSL certificate.

- **SSL (Secure Sockets Layer)** is a protocol that encrypts data between a client (browser) and a server.

- It ensures the confidentiality and integrity of data during transmission.

- Websites with SSL certificates have URLs starting with `https://`, which indicates a secure connection.

- SSL prevents man-in-the-middle attacks and eavesdropping on sensitive data.

- SSL certificates authenticate the identity of websites, assuring users they are connecting to legitimate sites.

- SSL is critical for online transactions, login pages, and data-sensitive websites.

-

22. What is a procedure? How to use it in VBScript?

- A **procedure** in VBScript is a block of code that performs a specific task.
- There are two types of procedures: **Sub procedures** (Subroutines) and **Function procedures**.
- **Sub Procedure**: Used to execute a task without returning a value.

```vbscript
Sub DisplayMessage()
    MsgBox "Hello, World!"
End Sub
```

- **Function Procedure**: Returns a value.

```vbscript
Function AddNumbers(a, b)
    AddNumbers = a + b
End Function
```

- To call a procedure, simply use its name:

```vbscript
DisplayMessage
MsgBox AddNumbers(5, 10)
```

23. What are Built-in functions available in VBScript with examples?

- **MsgBox**: Displays a message box to the user.

```vbscript
MsgBox "Welcome to VBScript"
```

- **Len**: Returns the length of a string.

```vbscript
MsgBox Len("Hello") ' Output: 5
```

- **UCase**: Converts a string to uppercase.

```vbscript
MsgBox UCase("hello") ' Output: HELLO
```

- **LCase**: Converts a string to lowercase.

```vbscript
MsgBox LCase("HELLO") ' Output: hello
```

- **Now**: Returns the current date and time.

```vbscript
MsgBox Now
```

- **IsDate**: Checks if a value is a valid date.

```vbscript
MsgBox IsDate("2024-11-09") ' Output: True
```

24. List the data types supported in JavaScript. Explain with examples.

- **String**: Represents a sequence of characters.

```javascript
let name = "John";
```

- **Number**: Represents numeric values, both integers and floating point.

```javascript
let age = 25;
let height = 5.9;
```

- **Boolean**: Represents `true` or `false`.

```javascript
let isAdult = true;
```

- **Object**: Stores collections of data and more complex entities.

```javascript
let person = { name: "John", age: 30 };
```

- **Array**: Stores multiple values in a single variable.

```javascript
let numbers = [1, 2, 3, 4];
```

- **Undefined**: A variable that has been declared but not assigned a value.
- **Null**: Represents the absence of any value.

25. How If ... else statement is executed in JavaScript?

- The `if...else` statement executes a block of code based on a condition.

```javascript
let age = 18;
if (age >= 18) {
    console.log("You are an adult.");
} else {
    console.log("You are a minor.");
}
```

- If the condition evaluates to `true`, the first block of code runs; if `false`, the `else` block executes.

26. What is response? How to send the text with embedded quotes?

- **Response** in web development refers to sending output from the server back to the client.
- In ASP.NET or server-side code, the `Response` object is used to send data to the browser.
- Example of sending text with embedded quotes:

```javascript
Response.Write("He said, \"Hello!\"")
```

- The `Response.Write()` method sends the text (or HTML) to the browser.

27. How to provide Hyperlinks in ASP.NET?

- Use the `<a>` tag in HTML or `HyperLink` control in ASP.NET to create hyperlinks.
- Example in HTML:

```html
<a href="http://www.example.com">Click here</a>
```

- Example using ASP.NET `HyperLink` control:

```aspx
<asp:HyperLink ID="HyperLink1" runat="server"NavigateUrl="http://
www.example.com">Click here</asp:HyperLink>
```

28. Discuss about Error Handling with necessary examples.

- **Error Handling** in JavaScript can be done using `try...catch`.

```javascript
try {
    let result = 10 / 0;
} catch (error) {
    console.log("Error: " + error.message);
}
```

- **Finally** block ensures that the code inside it runs regardless of whether an error occurred or not.

```javascript
try {
    let result = 10 / 0;
} catch (error) {
    console.log("Error: " + error.message);
} finally {
    console.log("This will always execute");
}
```

29. What are the various Data types in VBScript?

- **String**: A sequence of characters.

  vbscript
  ```vbscript
  Dim name name = "John"
  ```

- **Integer**: A whole number.

  vbscript
  ```vbscript
  Dim age age = 30
  ```

- **Boolean**: True or False value.

  vbscript
  ```vbscript
  Dim isActive isActive = True
  ```

- **Date**: Stores date and time.

  vbscript
  ```vbscript
  Dim currentDate currentDate = Now
  ```

- **Variant**: Default type for variables that can hold any data type.

  vbscript
  ```vbscript
  Dim x x = 10 ' Integer x = "Hello" ' String
  ```

30. What are the relational operators in JavaScript?

- **==**: Equal to.

  javascript
  ```javascript
  5 == 5 // True
  ```

- **===**: Strictly equal to (checks both value and type).

  javascript
  ```javascript
  5 === "5" // False
  ```

- **!=**: Not equal to.

```javascript
5 != 3 // True
```

- **!==**: Strictly not equal to (checks both value and type).

```javascript
5 !== "5" // True
```

- **>**: Greater than.
- **<**: Less than.
- **>=**: Greater than or equal to.
- **<=**: Less than or equal to.

31. Explain user-defined objects in JavaScript.

- **User-defined objects** are objects created by the developer to encapsulate data and behaviors.
- They can be created using constructor functions or object literals.
- Example using object literal:

```javascript
let car = { brand: "Toyota", model: "Corolla", year: 2020 };
```

- Example using constructor function:

```javascript
function Car(brand, model, year) {
    this.brand = brand;
    this.model = model;
    this.year = year;
}
let myCar = new Car("Toyota", "Corolla", 2020);
```

32. Give an account of HTML server controls.

- **HTML server controls** in ASP.NET are HTML elements that are given server-side functionality by adding the `runat="server"` attribute.
- Examples include:
  - `<input runat="server" type="button" value="Click Me" />` (Button control)
  - `<textarea runat="server"></textarea>` (TextArea control)
- Server controls interact with server-side code and can maintain state across requests.

33. State the uses of check and radio buttons.

- **CheckBox**: Allows users to select multiple options from a set.

  - Commonly used in forms to choose preferences.

- **RadioButton**: Allows users to select only one option from a set of choices.

  - Often used in surveys or forms with mutually exclusive options.

- Example:

```html
<input type="checkbox" name="newsletter" /> Subscribe to newsletter
<input type="radio" name="gender" value="male" /> Male
<input type="radio" name="gender" value="female" /> Female
```

34. Write down the process of request and response of an article through a webpage.

- **Request**: The client (browser) sends an HTTP request to the server when the user accesses a webpage.

  - The request contains details like URL, headers, cookies, etc.

- **Processing on the Server**: The server processes the request, which may involve querying databases or running server-side scripts (e.g., ASP.NET, PHP).

- **Response**: The server sends an HTTP response to the client, containing the content (HTML, CSS, JavaScript) of the article or page.

  - The response might also include cookies or headers for additional information.

35. Write short notes on IP Address and structure.

- **IP Address**: A unique identifier assigned to each device connected to a network, allowing communication between devices.

- It can be **IPv4** (32-bit address) or **IPv6** (128-bit address).

- **IPv4**: Usually written as four numbers separated by dots (e.g., 192.168.1.1).

- **IPv6**: Written as eight groups of four hexadecimal digits separated by colons (e.g., 2001:0db8:85a3:0000:0000:8a2e:0370:7334).

- **Structure**: IP addresses are divided into **Network** and **Host** portions, helping routers determine the destination of packets.