

1. What is JavaScript?

Answer:

JavaScript is a client-side scripting language used to make web pages interactive and dynamic.

2. What are JavaScript conditional statements?

Answer:

Conditional statements are used to perform different actions based on conditions.

Examples:

- if
- else if
- else
- switch

3. What is the difference between *if* and *switch*?

Answer:

- **if** works with multiple conditions (ranges, comparisons).
- **switch** works best with fixed values.

4. What are loops in JavaScript?

Answer:

Loops allow repeating code.

Examples:

- for
- while
- do...while
- for...of
- for...in

5. What are dialog boxes in JavaScript?

Answer:

Dialog boxes interact with the user.

- `alert()` – message popup

- `confirm()` – Yes/No box
- `prompt()` – input box

6. What is the DOM?

Answer:

DOM (Document Object Model) represents the HTML page as a tree structure which JavaScript can access and modify.

7. How do you access an element from the DOM?

Answer:

Using methods like:

- `document.getElementById()`
- `document.getElementsByClassName()`
- `document.getElementsByTagName()`
- `document.querySelector()`
- `document.querySelectorAll()`

8. What is innerHTML?

Answer:

A property used to read or change the content inside an HTML element.

9. What is a JavaScript User-Defined Function?

Answer:

A function created by the programmer.

Example:

```
function greet() {  
    alert("Hello!");  
}
```

10. What are JavaScript built-in functions?

Answer:

Predefined functions in JavaScript.

Examples:

- `parseInt()`
- `parseFloat()`
- `isNaN()`
- `Number()`
- `String()`
- `Math.round()`
- `Math.random()`
- `Date()` functions

11. What is form validation?

Answer:

Checking whether the form data entered by the user is correct before submitting.

12. How do you validate a form in JavaScript?

Example:

```
if (document.getElementById("name").value == "") {  
    alert("Name is required");  
    return false;  
}
```

13. What is event handling in JavaScript?

Answer:

Reacting to user actions like:

- `click`
- `mouseover`
- `submit`
- `keypress`

Example:

```
<button onclick="show()">Click me</button>
```

14. What is the use of `return false` in form validation?

Answer:

It stops form submission if validation fails.

15. What is the difference between == and === in JavaScript?

Answer:

- == checks value only
- === checks value and type

16. What is the purpose of `isNaN()`?

Answer:

Checks whether a value is **Not a Number**.

17. What does `Math.random()` do?

Answer:

Returns a random number between **0 and 1**.

18. How do you convert a string to an integer in JavaScript?

Answer:

Using:

```
parseInt("123");
```

19. What is an array in JavaScript?

Answer:

A list-like object used to store multiple values.

20. What is an object in JavaScript?

Answer:

A collection of key-value pairs.

Example:

```
let student = {name: "Amit", age: 20};
```

21. What is the difference between `var`, `let`, and `const`?

Answer:

- `var` → function scope
- `let` → block scope
- `const` → value cannot be reassigned

22. What is `event.preventDefault()`?

Answer:

Stops default browser behavior, like preventing form from submitting.

23. What is a callback function?

Answer:

A function passed as an argument to another function.

24. How do you change the CSS of an element using JavaScript?

Example:

```
document.getElementById("box").style.color = "red";
```

25. Why is JavaScript important for form validation?

Answer:

It:

- Gives instant feedback
- Saves server time
- Improves user experience