JavaScript Important Questions & Answers

1. What is JavaScript?

JavaScript is a lightweight, interpreted scripting language used to create dynamic and interactive content on web pages. It runs in the browser.

2. Difference between `var`, `let`, and `const`?

- `var`: Function-scoped, can be re-declared and updated.
- `let`: Block-scoped, cannot be re-declared but can be updated.
- `const`: Block-scoped, cannot be re-declared or updated.

3. What is the difference between == and ===?

- ==: Compares values after type conversion.
- ===: Compares both value and data type (strict equality).

4. What is a closure?

- A closure is a function that remembers variables from its outer scope even after the outer function has finished execution.

5. What is hoisting?

- Hoisting is JavaScript's behavior of moving variable and function declarations to the top of their scope before code execution.

6. What is an arrow function?

- A shorter syntax for writing functions introduced in ES6:
- Example:- `const add = (a, b) => a + b;`

7. What is the DOM?

- The **Document Object Model (DOM)** is a programming interface that allows scripts to update the content, structure, and style of a document.

8. Difference between null and undefined?

- `undefined`: A variable is declared but not assigned.
- `null`: An assigned value representing "no value".

9. What is the difference between stack and heap memory?

- **Stack**: Used for primitive types (Number, String, Boolean). Fast access.
- **Heap**: Used for reference types (Object, Array, Function).

10. What is a pure function?

A function that: Produces the same output for the same input.

Has no side effects (does not modify external variables).