**Q1. What is Javascript? How to use it?**

Ans: JavaScript is a high-level, interpreted programming language primarily used for client-side web development. It allows you to add interactivity and dynamic behavior to web pages. You can use JavaScript by embedding it directly within HTML documents using <script> tags or by linking to external JavaScript files.

**Q2. How many types of variable In Javascript?**

Ans: In JavaScript, there are three types of variables:

VAR: Variables declared with the var keyword are function-scoped or globally scoped. They can be re-declared and updated throughout the program.

LET: Variables declared with the let keyword are block-scoped. They can be reassigned but not re-declared within the same scope.

CONST: Variables declared with the const keyword are also block-scoped and cannot be reassigned or re-declared after initialization. However, they can still be mutated if they are objects or arrays.

**Q3. Define Data Types In Javascript?**

Ans: JavaScript has several data types, including:

**Primitive data types:**

* String: Represents textual data.
* Number: Represents numeric data.
* Boolean: Represents a logical value, true or false.
* Undefined: Represents a variable that has been declared but not assigned a value.
* Null: Represents the intentional absence of any value.
* Symbol (added in ECMAScript 6): Represents a unique identifier.

**Non-primitive data types (also called reference types):**

* Object: Represents a collection of key-value pairs.
* Array: Represents a collection of elements, indexed by integers.

**Q5. What's the difference between undefined and undeclared** **in JavaScript?**

Ans: In JavaScript:

* undefined means a variable has been declared but has not yet been assigned a value.
* undeclared means a variable has been referenced without being declared first.

**Q6. Using console.log() print out the following statement:**

***"The quote 'There is no exercise better for the heart than reaching down and lifting people up.' by John Holmes teaches us to help one another."***

Ans:

console.log("The quote 'There is no exercise better for the heart than reaching down and lifting people up.' by John Holmes teaches us to help one another.");

**Q.10 What is Condition Statement?**

Ans: A condition statement, often referred to as an if statement, is a programming construct that allows you to execute certain code based on the evaluation of a condition. It evaluates an expression and, if the expression is true, executes a block of code. If the expression is false, it skips the block of code or executes an alternative block of code.

**Q.11 Find circumference of Rectangle formula: C = 2 \* (length + width)?**

Ans: The formula provided calculates the perimeter (circumference) of a rectangle, not its circumference. The correct formula for the circumference of a rectangle is: C = 2 \* (length + width)

**Q.15 What is the result of the expression (5 > 3 && 2 < 4)?**

Ans: The expression evaluates to true because both conditions (5 > 3 and 2 < 4) are true, and the logical AND (&&) operator returns true only if both conditions are true.

**Q.16 What is the result of the expression (true && 1 && "hello")?**

Ans: The expression evaluates to "hello". In JavaScript, the logical AND (&&) operator returns the last truthy value if all operands are truthy. In this case, all three operands (true, 1, and "hello") are truthy, so the result is the last truthy value, which is "hello".

**Q.17 What is the result of the expression true && false || false && true?**

Ans: The expression evaluates to false. In JavaScript, the logical AND (&&) operator has higher precedence than the logical OR (||) operator. So, the expression is equivalent to (true && false) || (false && true). Since one of the expressions (true && false) and (false && true) evaluates to false, the overall result is false.

**Q.18 What is a Loop and Switch Case in JavaScript?**

Ans: Loop: A loop is a programming construct that allows you to execute a block of code repeatedly. Common types of loops in JavaScript include for, while, and do-while loops. Loops are used when you want to perform the same task multiple times.

Switch Case: Switch case is a control flow statement in JavaScript used to select one of many code blocks to be executed. It evaluates an expression and matches the value of that expression to a case label, and executes the statements associated with that case. It provides an alternative to long chains of if...else statements.

**Q.19 What is the use of isNaN function?**

Ans: The isNaN() function in JavaScript is used to determine whether a value is NaN (Not a Number) or not. It returns true if the value is NaN, otherwise it returns false. This function is often used to validate user input to ensure that it represents a valid number.

**Q.20 What is the difference between && and || in JavaScript?**

Ans:

* && (Logical AND): The && operator returns true if both operands are truthy. If any of the operands is falsy, it returns false. It short-circuits, meaning that if the left operand is falsy, it does not evaluate the right operand.
* || (Logical OR): The || operator returns true if at least one of the operands is truthy. If both operands are falsy, it returns false. Like &&, it also short-circuits, meaning that if the left operand is truthy, it does not evaluate the right operand.

**Q.21 What is the use of Void (0)?**

Ans: The void operator evaluates the given expression and then returns undefined. It is often used with the value 0 to create a hyperlink that doesn't navigate anywhere when clicked. For example:

<a href="javascript:void(0)">Click here</a>