JavaScript Fundamentals Exam – Answers & Explanations

## 1. What keyword begins a block of code that will run if the condition is false?

Correct Answer: else

Explanation:

* - if-not: Not a valid JavaScript keyword.
* - else: Correct. 'else' runs when the 'if' condition is false.
* - else-if: Used for multiple conditions, not for the default false block.
* - when: Not a JavaScript keyword.

## 2. Which tag is used to include JavaScript in an HTML file?

Correct Answer: <script>

Explanation:

* - <style>: Used for CSS, not JavaScript.
* - <script>: Correct. It's the HTML tag for embedding JavaScript.
* - <js>: Not a valid HTML tag.
* - <link>: Used to link stylesheets, not scripts.

## 3. What does the `++` operator do?

Correct Answer: Increases a number by 1

Explanation:

* - Increases a number by 1: Correct. The '++' operator increments by 1.
* - Decreases a number by 1: That's the '--' operator.
* - Makes a number positive: Use Math.abs() for that.
* - Converts to number: Use Number() or parseInt() for conversion.

## 4. const name = "Alice"; console.log(`Hello, ${name}!`);

Correct Answer: Hello, Alice!

Explanation:

* - Hello, ${name}!: Incorrect. This shows what the template literal looks like before evaluation.
* - Hello, Alice!: Correct. Template literals evaluate expressions inside ${}.
* - Hello, "Alice"!: Quotes are not printed unless included explicitly.
* - Hello, name!: Incorrect. The variable is evaluated, not printed by name.

## 5. What is the result of 3 + 4 \* 2?

Correct Answer: 11

Explanation:

* - 14: Incorrect. Would be correct if addition was done first, but operator precedence makes multiplication happen before addition.
* - 11: Correct. 4\*2 = 8; 3 + 8 = 11.
* - 10: Incorrect calculation.
* - 7: Incorrect calculation.

## 6. Which JavaScript function asks the user to input a value?

Correct Answer: prompt()

Explanation:

* - console.log(): Used to display messages in the console.
* - alert(): Displays a message, but does not take input.
* - prompt(): Correct. Prompts user to enter input.
* - confirm(): Only returns true/false confirmation.

## 7. let a = 10; let b = 20; console.log(`Sum is ${a + b}`);

Correct Answer: Sum is 30

Explanation:

* - Sum is 10 + 20: Incorrect. The expression is evaluated.
* - Sum is ${a + b}: That's the code before execution.
* - Sum is 30: Correct. The sum is evaluated inside the template literal.
* - 30: Incorrect. It's part of a string, not printed alone.

## 8. Which function prints to the browser console?

Correct Answer: console.log()

Explanation:

* - print(): Not a valid function in JavaScript for browser logging.
* - console.log(): Correct. Used to print to the browser console.
* - log.console(): Not valid JavaScript syntax.
* - display(): Not a valid JavaScript function.

## 9. What will this output? let x = 10; if (x > 5) { console.log('Yes'); }

Correct Answer: Yes

Explanation:

* - 10: The value of x is not printed.
* - Yes: Correct. x > 5 is true, so 'Yes' is logged.
* - x > 5: That's the condition, not the output.
* - Nothing: Incorrect. It does output 'Yes'.

## 10. let a = null; if (a == undefined) { console.log("Equal"); } else { console.log("Not Equal"); }

Correct Answer: Equal

Explanation:

* - Equal: Correct. null == undefined is true in loose equality.
* - Not Equal: Incorrect. Would be true for strict (===) comparison.
* - null: Not what is logged.
* - undefined: Not what is logged.

## 11. How do you check multiple conditions?

Correct Answer: if (x > 5 && y < 10)

Explanation:

* - if (x > 5 && y < 10): Correct. '&&' is the logical AND operator.
* - if (x > 5 and y < 10): Incorrect syntax in JavaScript.
* - if (x > 5 ||| y < 10): Invalid operator; '||' is used for OR.
* - if (x > 5 == y < 10): Incorrect logic; compares booleans in a confusing way.

## 12. What is the keyword to declare a function in JavaScript?

Correct Answer: function

Explanation:

* - function: Correct. Used to declare functions.
* - def: Python keyword, not JavaScript.
* - method: Not a keyword; refers to functions on objects.
* - fun: Not valid JavaScript syntax.

## 13. What is JavaScript primarily used for?

Correct Answer: Making web pages interactive

Explanation:

* - Styling web pages: That's CSS.
* - Structuring web pages: That's HTML.
* - Making web pages interactive: Correct. JavaScript adds interactivity.
* - Accessing databases: Not its primary purpose; that's backend work.

## 14. What does this condition check: `x > 10`?

Correct Answer: x is greater than 10

Explanation:

* - x is less than or equal to 10: That's 'x <= 10'.
* - x is greater than 10: Correct.
* - x equals 10: That's 'x == 10' or 'x === 10'.
* - x is not a number: That's checked with isNaN().

## 15. if ("false") { console.log("Yes"); } else { console.log("No"); }

Correct Answer: Yes

Explanation:

* - Yes: Correct. 'false' is a non-empty string, which is truthy.
* - No: Would run if the condition was falsy.
* - Error: No syntax error here.
* - false: Not a valid output.

## 16. Which keyword is used to declare a variable in JavaScript?

Correct Answer: All of the above

Explanation:

* - var: Declares a variable (function-scoped).
* - let: Declares a block-scoped variable.
* - const: Declares a constant block-scoped variable.
* - All of the above: Correct. All three are valid.

## 17. Which operator is used for strict equality?

Correct Answer: ===

Explanation:

* - ==: Loose equality (ignores type).
* - ===: Correct. Checks value and type.
* - =: Assignment operator.
* - !==: Strict inequality, not equality.

## 18. What data type is the value: true?

Correct Answer: Boolean

Explanation:

* - String: Only if in quotes.
* - Number: Only if coerced to one.
* - Boolean: Correct.
* - Undefined: Means not assigned.

## 19. What is the output of typeof 'hello'?

Correct Answer: string

Explanation:

* - text: Not a JavaScript type.
* - char: Not a JavaScript type.
* - string: Correct.
* - word: Not a type.

## 20. What does an if statement do?

Correct Answer: Runs code only if a condition is true

Explanation:

* - Runs code only if a condition is true: Correct.
* - Repeats code: That's a loop.
* - Stops a program: That's usually done with break or return.
* - Declares a variable: Use var/let/const for that.