JavaScript

1. Name the three ways to declare a variable?

**Var, let and const.**

2. Which of the three variable declarations should you avoid and why?

**Var , There is a chance of accidentally redeclaring a variable using the same name that may already exist in other parts of the code so it’s better to go with the other types of variable declarations.**

3. What rules should you follow when naming variables?

**The name must contain only letters, digits, or the symbols $ and \_.**

**The first character must not be a digit.**

4. What should you look out for when using the + operator with numbers and strings?

**Numbers are added. Strings are concatenated.**

5. How does the % operator work?

**The modulus operator (%) returns the division remainder.**

**In arithmetic, the division of two integers produces a quotient and a remainder.**

**In mathematics, the result of a modulo operation is the remainder of an arithmetic division.**

6. Explain the difference between == and ===.

**Is equal to, === is equal value and equal type.==**

7. When would you receive a NaN result?

**In case of trying to do arithmetic with a non-numeric string.**

8. How do you increment and decrement a number?

**Increment ++ , Decrement --**

9. Explain the difference between prefixing and post-fixing increment/decrement operators.

**If you use ++ operator as prefix like: ++var; then, the value of operand is increased by 1 then, only it is returned. but, if you use ++ as postfix like: var++; then, the value of operand is returned first then, only it is increased by 1.” The decrement operator would have a similar impact on the operand, except that instead of increasing the value of the operand, it would decrease it.**

10. What is operator precedence and how is it handled in JS?

**If an expression has more than one operator, the execution order is defined by their *precedence*, or, in other words, the default priority order of operators.**

**Grouping () – exponentiation\* - multiplication, division and remainder, addition and subtraction , last one is comma**

11. How do you log information to the console?

**Console.log()**

12. What does unary plus operator do to string representations of integers?

**The unary plus (+) precedes its operand *and evaluates* to its operand. It attempts to convert the operand to a number, if it isn't already.**

13. What are the eight data types in JavaScript?

**String, Number, Boolean, symbol, Object, Null, Undefined, Bigint**

14. Which data type is NOT primitive?

**Object because it can store collections of data, whereas primitive data type can only store a single data.**

15. What is the relationship between null and undefined?

**Usually, null is used to assign 'unknown' or 'empty' value to a variable.**

**The undefined data type represents value that is not assigned. While null is a special value that represents empty or unknown value and isn't pointing to any memory address.**

[**Difference Between Null and Undefined - javatpoint**](https://www.javatpoint.com/null-vs-undefined)

16. What is the difference between single, double, and backtick quotes for strings?

**Single and Double: Same thing.**

**Backtick "extended functionality": Allow us to embed variables and expressions into a string by wrapping them in $(….), And You can use multi-line strings and string interpolation features with it.**

17. What is the term for embedding variables/expressions in a string?

**extended functionality**

18. Which type of quote lets you embed variables/expressions in a string?

**Backtick**

19. How do you embed variables/expressions in a string?

**By wrapping them in $(…)**

20. How do you escape characters in a string?

**By adding backslash before**

21. What is the difference between the slice/substring/substr string methods?

**slice(start, end) extracts a part of a string and returns the extracted part in a new string.**

**substring() is similar to slice(). The difference is that start and end values less than 0 are treated as 0 in substring().**

**substr() is similar to slice(). The difference is that the second parameter specifies the length of the extracted part.**

22. What are the three logical operators and what do they stand for?

**&& and , || or , ! not**

23. What are the comparison operators?

**== equal to, === equal value and equal type, != not equal , !== not equal value or not equal type, > greater than, < less than, >= greater then or equal to, <= less than or equal to, ? ternary operator**

24. What are truthy and falsy values?

**Truthy - return true when resolved to true in boolean context.**

**Falsy - return false when resolved to false in boolean context.**

25. What are the falsy values in JavaScript?

**False, NAN, undefined , null ,zero, -0 , bigintger(0n), empty string, document.all**

26. What are conditionals?

**conditional operator that assigns a value to a variable based on some conditions  
if – if else – switch**

27. What is the syntax for an if/else conditional?

**if (*condition*) {  
  //*block of code to be executed if the condition is true*} else {  
  //*block of code to be executed if the condition is false*}**

28. What is the syntax for a switch statement?

**switch(*expression*) {  
  case *x*:  
*// code block*    break;  
  case *y*:  
*// code block*    break;  
  default:  
    // *code block*  
}**

29. What is the syntax for a ternary operator?

***variablename*= (*condition*) ?*value1*:*value2***

30. What is nesting?

**structuring the code to have a parent to child relationship.**

31. What are functions useful for?

**To store a piece of code that does a single task inside a defined block , and then call that code whenever is needed using a single short command.**

32. How do you invoke a function?

**Including the name of the function in the code somewhere followed by parentheses.**

33. What are anonymous functions?

**A function that doesn't have a name.**

34. What is function scope?

**Function scope: Variables that are declared inside a function are called local variables and in the *function scope***

**Local variables are accessible anywhere inside the function.**

35. What are return values?

**Tha values that a fuction returns when it has completed.**

36. What are arrow functions?

**An**[***arrow function expression***](https://www.digitalocean.com/community/tutorials/how-to-define-functions-in-javascript#arrow-functions)**is an anonymous function expression written with the “fat arrow” syntax** =>

**Like traditional function expressions, arrow functions are not hoisted, and so you cannot call them before you declare them. They are also always anonymous—there is no way to name an arrow function.**