

1) What are primitive data types in JS

It is the simplest type of data & these are the non mutable type of data.

- 1) Number
- 2) String
- 3) Boolean
- 4) undefined
- 5) null
- 6) Symbol

2) Explain the difference b/w null & undefined in JS

Undefined:

- * A variable that has been declared but not assigned any value automatically has the value undefined.
- * If function parameters are not provided with a value default to 'undefined'.
- * Accessing an object property that doesn't exist returns 'undefined'.

null:-

- * 'null' is a special value that represents the intentional absence of any object value.
- * It needs to be explicitly assigned to a variable.

3 How do you check the data type of a variable in JavaScript.

By using 'typeof' operator.
 (type of variable name)

4 Explain the concept of truthy value in JavaScript. Provide examples.

Truthy values:-

Values that are considered true when encountered in a Boolean context
 True, [' ',],

Falsy value :-

Values that are considered false when encountered in Boolean context.

⇒ false, 0, empty string, empty array, null, undefined, NaN

5 Difference b/w == & === operators in JavaScript, & how do they relate to data type

→ == It is a comparison operator, used to compare 2 variables.

=== It is used for strict comparison where it is used to compare data along with data type

6 How do you convert string to a number in JS

`parseInt('')`

`parseFloat('')`

7 Explain the diff b/w `++x` & `x++` increment operators in js

`++x` :-

It is a pre increment operator which increments the value by one before execution

`x++` :-

Post increment operator increases the value by one after execution.
So when the

8 How does JS handle NaN values, and how can you check if a value is NaN.

In js, NaN is a special value that represents the result of an operation that should return a number but doesn't

Ex:

`C.log(5 * 'Five') ⇒ NaN.`

To check if a value is NaN

`let x = 42;`

`let y = 'Hello'`

`C.log(isNaN(x)) ⇒ false`

`C.log(isNaN(y)) ⇒ True (Y is not valid num)`

9 Explain the concept of type coercion in j.s. Provide Ex.

① Type coercion refers to automatic conversion of values from one data type to another during certain operation @ comparison

Implicit coercion.

Automatically performed by JS engine while performing some operations

Ex: $5 + 10 = 15$

let $x = 5$

$y = '10'$

$C.log(x + y) \Rightarrow 510 \Rightarrow \text{String}$

Here y string is converted to num & concatenated

let $x = 5$, let $y = '5'$

$C.log(x == y) \Rightarrow \text{True}$

Explicit coercion.

Occurs when developers intentionally convert values from one type to another using functions or methods.
 $\Rightarrow \text{Number()}, \text{String() \& Boolean()}$

let numStr = '42';

$C.log(\text{Number(numStr)}) \Rightarrow 42$

$C.log(\text{String}(42)) \Rightarrow '42'$

10 What is the purpose of the undefined datatype & when might it be explicitly assigned to a variable

The purpose of the undefined value is to represent the ~~value~~ absence of value or the uninitialized state of variable.

If a variable is declared & not assigned with any value it ~~is~~ automatically gets the value undefined.

let x;

c.log(x) => Undefined

let z = 10;

z = undefined;

c.log(z) => Undefined

11 How do you ^{create} & use template literal (string ^{interpolation} ~~interpolation~~) in J.S

It's a convenient way to string interpolation in JS. It is enclosed by backticks (` `).

let name = 'Sairam';

let greeting = `Hello, good morning \${name}`;

=> Hello, good morning Sairam

12 What is Hoisting?

It is the process of taking the declaration to the top.

Hoisting occurs only in var.

13 What is IIFE
 \Rightarrow Immediately invoked function expression.

This function gets invoked by itself without calling statement.

The function gets invoked once the execution starts; we cannot re-use the same block of code.

```
(function () {  
    // code  
})()
```

14 What is meant by Default parameter passing?
Default parameter values allow you to specify default value for a function parameter.

That is when if parameter is not given while calling the function the default value will be added as parameter.

```
function triple (num1, num2 = 3) {  
    return num1 * num2;  
}  
console.log(triple(10));
```

$$\Rightarrow 10 \times 3 \Rightarrow 30$$

3 is default parameter

15 What is default return values,
⇒ undefined

In js if function does not explicitly return the value using 'return' statement then the default value is undefined.

16 How to pass an unlimited number of parameters to a function.

1 argument, rest parameters. → we can pass unlimited number of parameters.

```
function sum(...number) {  
  return numbers.reduce((total, num) => total + num, 0 total + num)
```

arguments :-

```
function sum() {  
  let total = 0;  
  for (let i = 0; i < arguments.length; i++) {  
    total += arguments[i];  
  }  
  return total;
```

c.log(sum(1, 2, 3, 4, 5)) ⇒ 15