1. How can you create an object in javascript? explain with an example.

In JavaScript, an object can be created in two ways: 1) using Object Literal/Initializer Syntax 2) using the Object() Constructor function with the new keyword. Objects created using any of these methods are the same.

Example:

```
var p1 = { name:"dev" }; // object literal syntax

var p2 = new Object(); // Object() constructor function
p2.name = "dev"; // property
```

2. How can you create an Array in javascript? explain with example.

Variable can hold only one value. We cannot assign multiple values to a single variable. JavaScript array is a special type of variable, which can store multiple values using a special syntax.

It is not required to store the same type of values in an array. It can store values of different types as well. Every value is associated with a numeric index starting with 0.

```
let data = [1, "Steve", "DC", true, 255000, 5.5];
```

3. What is Callback? Explain with examples.

Any function that is passed as an argument to another function so that it can be executed in that other function is called callback function.

```
function greeting(name) {
alert(`Hello, ${name}`);
}

function processUserInput(callback) {
const name = prompt("Please enter your name.");
callback(name);
}

processUserInput(greeting);
```

4. What are the ways to define a variable in javascript?

In JavaScript, we can declare a variable in different ways by using different keywords. Each keyword holds some specific reason or feature in JavaScript. Basically, we can declare variables in three different ways by using **var**, **let** and **const** keywords. Each keyword is used in some specific conditions.

var: This keyword is used to declare variables globally. If you used this keyword to declare a variable then the variable can accessible globally and changeable also. It is good for a short length of codes, if the codes get huge then you will get confused.

let: This keyword is used to declare variable locally. If you used this keyword to declare a variable then the variable can accessible locally and it is changeable as well. It is good if the code gets huge.

const: This keyword is used to declare variable locally. If you use this keyword to declare a variable then the variable will only be accessible within that block similar to the variable defined by using let and difference between let and const is that the variables declared using const values can't be reassigned. So we should assign the value while declaring the variable.

5. What is the difference between null and undefined?

Undefined means the variable has been declared, but its value has not been assigned. Null means an empty value or a blank value. The typeof() operator returns undefined for an undefined variable. The typeof() operator returns the type as an object for a variable whose value is assigned as null.

6. What is NaN in javascript? Any base to integer in javascript?

In JavaScript, NaN is short for "Not-a-Number".In JavaScript, NaN is a number that is not a legal number.The Number.isNaN() method returns true if the value is NaN, and the type is a Number.

In JavaScript **parseInt() function (or a method) is used to convert the passed-in string parameter or value to an integer value itself**. This function returns an integer of the base which is specified in the second argument of the parseInt() function.

7. What will be the output of below code?

This code will give error .Due to syntax error this code will not execute.

8. When should I use the Arrow function in Javascript?

Arrow functions **introduce concise body syntax, or implicit return**. This allows the omission of the curly brackets and the return keyword. Implicit return is useful for creating succinct one-line operations in map , filter , and other common array methods.

9. Explain the Prototype with example

JavaScript is a prototype based language, so, whenever we create a function using JavaScript, JavaScript engine adds a *prototype* property inside a function, **Prototype property** is basically an object (also known as Prototype object), where we can attach methods and properties in a prototype object, which enables all the other objects to inherit these methods and properties.

10. What is the difference between .forEach loop and .map loop?

- ⇨ The map() method returns a new array, whereas the forEach() method does not return a new array.
- ⇨ The map() method is used to transform the elements of an array, whereas the forEach() method is used to loop through the elements of an array.
- ⇨ The map() method can be used with other array methods, such as the filter() method, whereas the forEach() method cannot be used with other array methods.

11. What is a constructor in javascript? Explain with examples.

A constructor is a special function that creates and initalizes an object instance of a class.

Example :

```
function demo(fname, lname) {

this.fname = fname;
this.lname = lname;
}

// console.log(demo("John","doe")); // undefined
const data = new demo("Dev", "Vasita"); // create with new
console.log(data);
console.log(data.fname);
console.log(data.lname);
```

12. What is the role of closure in javascript?

Closure means that an inner function always has access to the vars and parameters of its outer function , even after the outer function has returned.

13. What is the output of below code?

```
var array = ["DataFlair", 2019, 1.0, true];
var msg = "Array: [";
for(var i = 0; i < array.length-1; i++){
msg += array[i] + ", ";
}

msg += array[array.length-1] + "]";
console.log(msg);
```

15.What is meant by "this" in javascript?

"This" keyword **refers to an object that is executing the current piece of code**. It references the object that is executing the current function. If the function being referenced is a regular function, "this" references the global object.

16.How to validate a form in javascript?

By using Regular Expressions we can validate a from in javascript as per conditions.

17.What are object prototypes?

Every object in JavaScript has a built-in property, which is called its prototype. The prototype is itself an object, so the prototype will have its own prototype, making what's called a prototype chain.

18. What is the rest parameter?

The rest parameter is an improved way to handle function parameters, allowing us to more easily handle various inputs as parameters in a function. The rest parameter syntax allows us to represent an indefinite number of arguments as an array. With the help of a rest parameter, a function can be called with any number of arguments, no matter how it was defined.

19.What is the use of promises in javascript?

Promises are the ideal choice for handling asynchronous operations in the simplest manner. Prior to promises events and callback functions were used but they had limited functionalities and created unmanageable code. Multiple callback functions would create callback hell that leads to unmanageable code. Also it is not easy for any user to handle multiple callbacks at the same time.

Syntax :

```
var promise = new Promise(function(resolve, reject){
//do something
});
```

20.What are classes in javascript?

Classes are similar to functions. Here, a class keyword is used instead of a function keyword. Unlike functions classes in JavaScript are not hoisted. The constructor method is used to initialize. The class name is user-defined.

```
class emp {
constructor(name, age) {
this.name = name;
this.age = age;
```

```
}
}
const emp1 = new emp("Geek1", "25 years");
document.write(emp1.name);
document.write(":");
document.write(emp1.age);
```