**1. Determine what this Javascript code will print out (without running it):**

x = 1;

var a = 5;

var b = 10;

var c = function(a, b, c)

{ var x = 10;

document.write(x); // 10

document.write(a); //8

var f = function(a, b, c) {

b = a;

document.write(b); //8

b = c;

var x = 5;

}

f(a,b,c);

document.write(b); //9

}

c(8,9,10);

document.write(b); //10

document.write(x); } //1

**Ans: 10 8 8 9 10 1**

**2. What is the difference between a method and function?**

Function is a code written to perform specific task. It can be invoked by calling functionName with (); Syntax:

function functionName(parameters) {

// Content

}

Method is a property of an object that contains a function definition.

Syntax:

object = {

methodName: function() { // Content } };

**3. What does 'this' refer to when used in a Java method?**

➔ In Java method, this refers to object of current class.

**4. What does 'this' refer to when used in a JavaScript method?**

The JavaScript this keyword refers to the object it belongs to.

It has different values depending on where it is used:

* In a method, this refers to the owner object.
* Alone, this refers to the global object.
* In a function, this refers to the global object.
* In a function, in strict mode, this is undefined.
* In an event, this refers to the element that received the event.
* Methods like call(), and apply() can refer this to any object.

**5. What does 'this' refer to when used in a JavaScript constructor function?**

**Ans:** When used in JavaScript constructor function, “this” does not have a value. It is a substitute for the new object. The value of this will become the new object when a new object is created.

**6. Assume object x is the prototype for object y in Javascript. Object x has a method f( ) containing keyword 'this'. When f is called by x.f( ), what does 'this' refer to?**

➔ Here, “this” refers to object x.

**7. What is a free variable in JavaScript?**

➔ Free variable is a variable referred to by a function that is not one of its parameters or local variables.

**8. Create an object that has properties with name = "fred" and major="music" and a property that is a function that takes 2 numbers and returns the smallest of the two, or the square of the two if they are equal.**

var obj = {

name: "fred",

major: "music",

compute: function (x, y) {

if (x < y) { return x; }

else if (y > x) { return y; }

else if (x === y) { return x \* x };

}

};

**9. Write Javascript code for creating three Employee objects using the "new" keyword and a constructor function. Employee objects have the following fields: name, salary, position.**

class Employee {

constructor(name, salary, position) {

this.name = name;

this.salary = salary;

this.position = position;

}

}

var emp1 = new Employee("Tom", 1000, "HR");

var emp2 = new Employee("Duke", 2000, "Developer");

var emp3 = new Employee("Hary", 3000, "Tester");

**10. Write a Javascript function that takes any number of input arguments and returns the product of the arguments.**

function product() {

let product = 1;

for (let key in arguments) {

product \*= arguments[key];

}

return product;

}

console.log(product(2, 3, 4,1,2)); //outputs 48

**11. Write an arrow function that returns the maximum of its three input arguments.**

var maxVal = (x, y, z) => { return Math.max(x, y, z) };

var a = maxVal(2, 5, 12)

alert(a);