**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**

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

|  |  |
| --- | --- |
| **Method** | **Function** |
| - Every block ({}) is a scope | - Only 2 scopes: global scope, function scope |

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

- 'this' refer to the class that contain the method

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

- 'this' refer to the owner object

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

- With new keyword (consctructor) -> 'this' refer to newly created instance ([object Object])

function myFunction() {

return this;

}

var myfunc = new myFunction();

- no `new` keyword -> global object ([object Window]

**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?**

- 'this' refer to the object x

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

- A variable referred to by a function that is not one of its parameters or loval 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 o = {

name: "fred",

major: "music",

calculate: function(num1, num2) {

if (num1 === num2) return Math.pow(num1, num2);

if (num1 < num2) return num1;

if (num1 > num2) return num2;

}

}

**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.**

function Employee(name, salary, position) {

this.name = name;

this.salary = salary;

this.position = position;

}

var employee1 = new Employee('Phu', 100000, 'SE');

var employee2 = new Employee('Phu2', 200000, 'SE2');

var employee3 = new Employee('Phu3', 300000, 'SE3');

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

function myFunct() {

var product = 1;

for (i = 0; i < arguments.length; i++) {

product \*= arguments[i];

}

return product;

}

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

var maxFunct = (num1, num2, num3) => {

return Math.max(num1, num2, num3);;

}