

Name \_\_\_\_\_

ID Number \_\_\_\_\_

CMSC 122

Exam 2

Fall 2019

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## Section 1 –3 Points each

1. Given:

```
var num = 27;
num = (num % 7) * 5;
alert(num);
```

What will the alert box display? **30.**

2. Which statement is true? Simply write the letter of the true statement: **C.**

- A.** The first index in an array is 1
- B.** Strings are mutable
- C.** The + operator can be used to concatenate two strings
- D.** It is not possible to have an `if` statement without an `else`

3. Given:

```
var str = "hello";
str.toUpperCase();
alert(str);
```

What will the alert box display? **hello (must be all lower case).**

4. Given:

```
var num = 5, ans;
num *= 7;
ans = num++;
alert(ans);
```

What will the alert box display? **35.**

5. Given:

```
var myVar1 = 10, myVar2 = 30;
if (myVar1 == 20 || myVar2 < 30)
    alert("line 1");
else if (myVar2 == 30)
    alert("line 2");
else
    alert("line 3");
```

What will the alert box display? **line 2 .**

6. Given:

```
var myVar1 = 10;
var myVar2 = 30;
if (myVar1 == 10 && myVar2 < 50)
    alert("line 1");
else if (myVar2 == 30)
    alert("line 2");
else
    alert("line 3");
```

What will the alert box display? **line 1.**

7. Given the code below, how many alert boxes with Hello will show up? **6.**

```
var count = 0;
do{
    alert("Hello");
    count += 2;
}while (count <= 10);
```

8. Given the code below, how many alert boxes with Hello will show up? **9.**

```
for (var i =0; i<=2; i++)
{
    for (var j=0; j<3; j++)
        alert("Hello");
}
```

9. Given:

```
var myVar1 = [7,6,5];
var myVar2 = myVar1;
myVar2[0] = 20;
myVar2 = [1,2,3];
alert(myVar1[0]+ myVar2[0]);
```

What will the alert box display? **21.**

10. Given:

```
function example1(myNum) {
    myNum = 10;
}

var myData = 5;
example1(myData);
alert(myData);
```

What will the alert box display? **5.**

11. Given:

```
function example2(myArray) {
    myArray[0]=10;
}
var myVar=[5,4,2];
example2(myVar);
alert(myVar);
```

What will the alert box display?**10,4,2 .**

12. Given:

```
function example3(myStr) {  
    myVar="HTML";  
    myStr="CSS";  
}  
var myVar = "JavaScript";  
example3(myVar);  
alert(myVar);
```

What will the alert box display? **HTML**.

13. Given:

```
var x = 10;  
if (x < 5) {  
    alert("One");  
}  
else (x < 15) {  
    alert("Two");  
}
```

There is an error in this code. What is wrong with it? (You can assume that it has been correctly placed in the <script> element in an html document).

**Answer** the else part can not have a condition

14. Given:

```
function example4(myNum)  
{  
    myNum = 10;  
}  
  
var x =5, y;  
y = example4(x);  
alert(myNum);  
alert(y);
```

There is an error in this code. What is wrong with it? (You can assume that it has been correctly placed in the <script> element in an html document).

**Answer** myNum is a local variable and is out of scope outside of the function.

15. Given:

```
var myArray =[50,60,70];  
myArray.pop();  
myArray.push(10);  
myArray.shift();  
myArray.unshift(30);  
alert(myArray);
```

What will the alert box display? **30,60,10**.

## Section 2—Write the code

16. (18 pts) Write a function called `printStr` that will have a string parameter called `myStr` and return a new string where all letters in the string that was passed in have been replaced with `*` except the first and last letter. For example, if the string `hello` is passed in, the return value will be `h***o` (notice that `ell` have been replaced with `***`). As another example, if `computer` is passed in, the return value will be `c*****r` (notice that `ompute` have been replaced with `*****`). You are not displaying anything from the function, you are just creating and returning the new string. The only string methods and properties you may use are `charAt` and `length`. You should know how to use them from your work on project 3. You only need to write the function and can assume a string with at least 2 characters will be passed in.

```
function printStr(myStr)
{
    let str =myStr.charAt(0);

    for (let i =1; i<myStr.length-1; i++)
    {
        str = str + "*";
    }

    str += myStr.charAt(myStr.length-1);
    return str
}
```

17. (19 pts) Finish the function below. You can assume `num1` and `num2` will be positive integers such that `num1 <= num2`. The function will display to the webpage a table where each row is the multiples of an integer from 1 \* the integer up to 10 \* the integer. In the first row, the integer will be `num1` followed by a row for each integer that come after `num1` until the last row in which the integer will be `num2`. For example, the following call:

```
printTable(7, 10);
```

will produce the table below :

7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

```
function printTable(num1, num2)
{
    document.writeln("<table border='10'>");
    document.writeln("<caption><b>Multiplication Table</b></caption>");

    for (let i = num1; num1 <= num2; num1++)
    {
        document.writeln("<tr>");
        for (let j = 1; j <= 10; j++)
        {
            document.writeln("<td>" + num1 * j + "</td>");
        }
        document.writeln("</tr>");
    }

    document.writeln("</table>");
}
```

18. (18 pts) Write a function called `doubleNum` with 2 parameters: `myArray` and `num`. You can assume `myArray` is a reference to an integer array and `num` will be an integer. The function will double any instance of `num` in the array. If `num` is not in `myArray`, it will not be modified. Sample top-level code is given to you with the output in the comment. Notice the original array **is modified**. Just write the code for the function. You can not use any built-in array methods such as `push` and `pop`, but you can use the `length` property.

<script>

```
function doubleNum (myArray, num)
{
    for(var i =0; i < myArray.length; i++)
    {
        if(myArray[i]==num)
            myArray[i] *= 2;
    }
}
```

```
var y = [5,4,2,4,3];
alert (y); //5,4,2,4,3
doubleNum(y,4);
alert (y); //5,8,2,8,3
var x = [7,2,3,4,8,7];
alert (x); //7,2,3,4,8,7
doubleNum(x,5);
alert (x); //7,2,3,4,8,7
</script>
```