**COMPUTER SCIENCE 2 – JAVASCRIPT PROGRAMMING – CHAPTER 2 TEST**

**NAME: Jake Lorah DATE: 1/23/17**

**Each question below is worth 3 points. Please answer clearly in the space provided.**

1. Explain the difference between events and event handlers.

An event is a specific action taking place on the site that causes the browser to run a set of JavaScript commands. Event handlers are the block of code as a result of an event triggered in a website.

1. Name any 3 event handlers supported by JavaScript.

3 event handlers are onLoad, onUnLoad, and onClick.

1. Clicking the SUBMIT button in an online form will trigger the onSubmit event handler.
2. Clicking the mouse button on a website will trigger the onClick event handler.
3. Clearing an online form will trigger the onLoad event handler.
4. Explain how an operator is different from an operand.

An Operator is an element that can be used within an expression to perform an action. The variables and/or expressions that the operator is being applied to are the operands.

1. Review the code sample below. What is it? What does it do/represent?

Math.SQRT2;

This is a Math Constant. This will find the value of the square root of 2.

1. Explain what the following code is going to do and provide the output:

document.write(3.1415926535897932.toFixed(7));

This will write the number rounded by 7 decimal places. The output will be 3.1415927

1. Describe a disadvantage of using the code from question #8.

A disadvantage of using the code above is that the output will be printed out as a string text, not numeric.

1. When using logical operators you take multiple actions into account. As a result the quality of your website improves.
2. Explain how math methods are different from math constants.

Math methods allow the program to quickly perform various mathematical calculations without the programmer having to write entire sets of code each time. An example is Math.Random. Math constants are the calculated number. It gives you a number to use to reference set values. An example is Math. SQRT2

1. List any 4 math methods used in JavaScript programming.

4 math methods are Math.random, Math.sqrt, Math.sin, and Math.abs

1. Review the code sample below. What is it? What is it going to do?

var msg = (PasswdEnt == UserPass) ? “Welcome” : “Access Denied”;

This is an assignment operator because you are assigning values to declared variables. This will print “Welcome” if the user’s password is equal to UserPass or “Access Denied” if the password doesn’t match.

1. You have accidentally divided a number by a non-numeric variable. As a result NaN appears on the screen.
2. You have accidentally divided a number by a 0. As a result Infinity appears on the screen.
3. Review the code sample below. What is it? What does it do/represent?

Math.E;

This is a Math Constant. This will produce the natural logarithm base of E.

1. (Q 14 & 15) The previous scenarios are examples of Illegal Operations.
2. The date method getDate() retrieves the **day of the month** from the date object.
3. The date method getMonth() retrieves the **month of the year** from the date object.
4. The date method getFullYear() retrieves the **four digit year** from the date object.
5. What are logical operators used for?

Logical operators compare multiple expressions to reach a decision.

1. What is the main difference between time delayed and timed interval commands?

Time-delayed commands are executed at a certain time a command is executed. It delays the time. You would use this for an error message. Time-interval commands are executing commands in intervals. This slows down the time. To run a certain command once after a set amount of milliseconds you can use the setTimeout command. You would use this for a countdown.

1. You are using a time delayed command to postpone the execution of your code by 33 seconds. What specific value is needed in order for this delay to occur?

33 seconds = 33,000 milliseconds. You will have to use 33,000 milliseconds to delay the execution.

1. Explain the difference between these two sets of code:
   1. clearInterval();

clearInterval() will clear the time once a certain amount of time is reached. This will stop time-interval This is used for Time-interval commands.

* 1. clearTimeout();

clearTimeout() will clear the time once the certain time is reached. This will stop time-delayed. This is used for Timed-delayed commands.

1. Review the code sample below. What is it? What does it do/represent?

Math.ceil();

This is a Math Method. The output is X rounded up to the next highest integer.

1. Analyze the code sample below. What is it? Explain what it is going to do:

<INPUT TYPE=RADIO NAME=COLORS onClick=“document.bgColor=‘red’;”>Red<BR>

This is an event handler. When you click on the radio button, the background will turn red.

1. Analyze the code sample below. Explain in detail what it is going to do and provide the final output.

var x=Math.abs(-16);

var y=Math.sqrt(16);

var z=Math.round(2.5);

document.write(x);

document.write(y);

document.write(z);

This will assign the variable x to the output of Math.abs(-16). Then assign the variable y to the output of Math.sqrt(16). Then assign the variable z to the output of Math.round(2.5). These three pieces of code are examples of Math Methods. The output will be…

16

4

3

1. Analyze the code sample below. Explain in detail what it is going to do and provide the final output.

var a = new Date();

var b = a.getDate();

var c = a.getMonth();

var d = a.getYear();

document.write(c+“/”+b+”/”+d);

This will assign variable a to new Date() function. Then assign variable b to a.getDate() function. Then assign variable c to a.getMonth() function. Then assign variable d to a.getYear() function. The output will be…

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1. Analyze the code sample below. Explain in detail what it is going to do.

var TimeDelay = setTimeout(alert(“Good Morning”), 5000);

clearTimeout();

This will assign the variable TimeDelay to setTimeout with parameters. This will print “Good Morning” after 5,000 milliseconds or 5 seconds.

1. Assuming that x =100 and y=0, what is the outcome of each of the following expressions?
   1. (x==100);
   2. !(y==0);
   3. (x >= 100) && (y <=100);

TRUE

1. Describe the specific objective of Chapter 2 Case Assignment #4.

The objective of Case Assignment #4 is to create your own website from scratch that includes the information they give us. Also a countdown until the date the mall opens must be on the screen.

1. What was the name of the company from that assignment.

Cutler Shopping Mall

1. Review the code sample below. What is it? What does it do/represent?

Math.exp(x);

This is a Math Method. It will find the exponent of x.