Exam Rules

• Show all your work. Your grade will be based on the work shown.

• The exam is closed book and closed notes.

• When taking the exam, you may have with you pens or pencils, and an 8 1/2” x 11” piece of paper filled with notes, programs, etc.

• You may not use a computer or calculator.

• All books and bags must be left at the front of the classroom during this exam.

• Do not open this exams until instructed to do so.

<table>
<thead>
<tr>
<th>Question 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 2</td>
<td></td>
</tr>
<tr>
<td>Question 3</td>
<td></td>
</tr>
<tr>
<td>Question 4</td>
<td></td>
</tr>
<tr>
<td>Question 5</td>
<td></td>
</tr>
<tr>
<td>Question 6</td>
<td></td>
</tr>
<tr>
<td>Question 7</td>
<td></td>
</tr>
<tr>
<td>Question 8</td>
<td></td>
</tr>
<tr>
<td>Question 9</td>
<td></td>
</tr>
<tr>
<td>Question 10</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
</tr>
</tbody>
</table>
1. True or False:

(a) ____ In HTML, elements displayed by the browser are in the <head> section.
(b) ____ To use CSS, you must link to an external style sheet.
(c) ____ Links cannot be styled.
(d) ____ Tags describe properties of an element.
(e) ____ In HTML, you can have lists nested inside lists.
(f) ____ Strict XHTML requires the use of <br /> instead of <br />
(g) ____ XHTML is the same as strict HTML 4.01.
(h) ____ In JavaScript, loops can be nested inside loops.
(i) ____ The regular expression /\w(10)/ matches the form of US phone numbers.
(j) ____ JavaScript functions cannot call other functions.

2. Answer in two sentences or less the following:

(a) What is a function in JavaScript? Give an example.

(b) How do you define a function in JavaScript?

3. Fill in the following table with the corresponding decimal or hexcode representation of the number. For partial credit, show your work.

<table>
<thead>
<tr>
<th>Decimal</th>
<th>Hexcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>#12</td>
</tr>
<tr>
<td>160</td>
<td>#a4</td>
</tr>
<tr>
<td></td>
<td>#fe</td>
</tr>
</tbody>
</table>
4. (a) What does the following JavaScript code do? Write the ending value for each variable in the box below. (Show your work for partial credit.)

```javascript
var date, minutes, hours, month = "May";

minutes = 100;
hours = minutes / 60;
minutes = minutes % 60;
date = month + " 21";
minutes--;
hours = hours + 10;
```

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>date</td>
<td>minutes</td>
<td>hours</td>
<td>month</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) What does the following JavaScript code do?

```javascript
function checkPassword() {
    var password = "hello";
    var input = prompt("Please enter password");
    while (input != password) {
        input = prompt("Please enter password");
    }
    alert("Congrats! You guessed the password!");
}
```
5. Fill in the following Javascript functions that will do the following:

(a) Displays a pop-up window with the message, “Hello”:

```javascript
function greetUser()
{
}
```

(b) Take as input a number, `hour`, and return true if `hour` is less than 11, otherwise return false:

```javascript
function isMorning(hour)
{
}
```

(c) Takes as input a number, `count`, and displays ”Are you sure?” that many times:

```javascript
function checkWithUser(count)
{
}
```
6. Be the browser with the following HTML files (note that the CSS and JavaScript is in-line).

(a) Draw what the user will see on the screen when the browser loads. Indicate any style (color, borders, fonts, etc.).

```html
<html>
<head>
<style>
body {
    font-family: Florence, cursive;
}
img {
    padding:5px;
    margin:0px 20px;
    border-style:dotted;
}
#emily {
    width = 200px;
    float : left;
}
</style>
<script>
function displayMessage(message) {
    alert(message);
}
function disappear(id) {
    document.getElementById(id).style.display = "none";
}
</script>
</head>
<body onload="displayMessage('welcome');" onresize="displayMessage('I\'m shrinking');">
    <div id="emily">
        <img src = "emily.gif" width= "150" onclick="disappear('dickinsonQuote');">
    </div>
    <blockquote id="dickinsonQuote" onmouseover="displayMessage('Hello!');">
        This is my letter to the world,<br>
        That never wrote to me,<br>
        The simple news that Nature told,<br>
        With tender majesty. <br>
        --Emily Dickinson
    </blockquote>
</body>
</html>
```

(b) What happens when the page is resized?

(c) What happens when you click on the image?
7. Write the style sheet, lounge.css, that will arrange the following page:
the fonts should be large and cursive, the headings should be orange with the h1 at
150% and h2 at 130%, and the paragraph guarantee should have serif fonts, a red
solid border, background color yellow, and a background image repeated across the
upper edge (path for the image is “images/background.gif”). Further, the elixir
menu (contained in a div) should be displayed as a sidebar menu on the upper left
hand side of the page.

(Hint: Do not change any of the HTML code.)
8. Consider the following table:

<table>
<thead>
<tr>
<th></th>
<th>High / Low (°F)</th>
<th>Precip. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue</td>
<td>Mostly Sunny</td>
<td>70°/54°</td>
</tr>
<tr>
<td>Wed</td>
<td>Mostly Sunny</td>
<td>75°/58°</td>
</tr>
<tr>
<td>Thu</td>
<td>Sunny</td>
<td>77°/59°</td>
</tr>
<tr>
<td>Fri</td>
<td>Partly Cloudy</td>
<td>79°/62°</td>
</tr>
</tbody>
</table>

Last Updated May 18 11:16 a.m. ET

(a) Write the HTML for the **first row only** of the table:

*(Hint: the table has 5 data cells in each row)*

(b) Write the HTML for the **second row only** of the table:

*(Hint: the image is called “mostlySunny.gif”)*

(c) Write the CSS to style the table:

*(Hint: remember to provide background color to the first row only, center align all text, and style the caption)*
9. Create a form for ordering pizza from 228 Pizza Shop. Your form should have the following choices (the name used by the web application is included in typewriter font):

- type of crust (thin, thick): crust,
- toppings (extra cheese, pepperoni, mushrooms): toppings[],
- name: name,
- a text area for comments and special instructions: comments

For the first, you should allow only one answer (ie radio buttons or pull-down menu), while for extras, multiple answers are expected (i.e. checkboxes).

The web application for processing the form is located at:
http://comet.lehman.cuny.edu/stjohn/pizza.php
10. Write a complete HTML file with JavaScript for a guessing game program that asks the user to guess your secret number:

- If they enter a number that’s too low, tell them so, and prompt them for another guess.
- Similarly, if they enter a number that’s too high, tell them so, and prompt them for another guess.
- When they guess the correct number, congratulate them and end the game.