1. What HTML element indicates the most important header text in the body of a web page?  
   **<h1>**
2. What HTML elements make text italic by default on most web browsers? List two different tags.

**<em> <i> <var>**

1. What HTML elements indicate computer code? List two different tags.

**<var> <code> <samp>**

1. What HTML element allows you to embed CSS?  
   **<style>**
2. Fix this HTML code so it will validate: <a href="http://cnn.com>"News</a>  
   **<a href="http://cnn.com">News</a>**
3. Fix the syntax error in this CSS code: p { font-size = 10rem }

**p { font-size: 10rem }**

1. Show at least two different ways to specify bright red in CSS code.

**#FF0000 rgb(255,0,0) rgba(255,0,0,1.0)**

1. Which language defines the structural layer of a web page? Write the full name

**HyperText Markup Language**

1. Which language defines the presentational layer of a web page? Write the full name

**Cascading Style Sheet**

1. Which language defines the behavioral layer of a web page? Write the full name

**JavaScript**

1. What are the four required elements in an HTML5 document?

**<html> <body> <title> <meta charset="utf-8">**

1. Rewrite the following content to mark it up as an HTML table. Use as many appropriate tags as possible.

*Name Exam 1 Exam 2*

*Eric 75 79*

*Darren 106 103*

*Ave. 90.5 91.0*

<table>

<thead>

<tr><th>Name</th><th>Exam 1</th><th>Exam 2</th></tr>

</thead>

<tbody>

<tr><td>Eric</td><td>75</td><td>79</td></tr>

<tr><td>Darren</td><td>106</td><td>103</td></tr>

</tbody>

<tfoot>

<tr><td>Ave.</td><td>90.5</td><td>91.0</td></tr>

</tfoot>

</table>

1. This HTML attribute is used to specify the URL of an image in the <img> tag. **src**
2. The **main** purpose of headings (<h1>,< h2>, etc.) is to control text size True **False**
3. By default, most web browsers will indent paragraphs. True **False**
4. The names of HTML attributes should be in quotes. True **False**
5. Which HTML tag is used to include an external style sheet?  **<link>**
6. Which HTML tag is to include JavaScript?  
   **<script>**
7. Which tag is used to make a radio button?  
   **<input type="radio">**
8. Which two tags are used to make a drop down menu in a form?

**<select> <option>**

1. Which tag is used to define an ordered list?  
   **<ol>**
2. What symbol is used in CSS to select elements by their unique id? **#**
3. What CSS property moves an element down to avoid previously floated element.

**clear**

1. Write the HTML code to insert a picture with the source file "smallpic.jpg" and then make this picture a hyperlink to "bigpic.jpg"

<a href="bigpic.jpg">  
 <img src="smallpic.jpg">  
</a>

1. Consider this CSS code:  
   nav ul li {   
    background-color: red;   
    font-weight: bold;  
   }  
     
   What part is the selector? nav ul li  
     
   The colon (:) is used to separate  
   CSS **properties** from their values.  
     
   What values are used? **red** and **bold**
2. In CSS, the . operator selects elements by their **class** name.

**Consider this code:**  
  
<ol class="num">

<li id="first" class="best">Derpy</li>

<li id="second" class="good">Rarity</li>

<li id="third" class="good">Spike</li>

</ol>

<ul class="items">

<li class="good">Caring</span></li>

<li class="good">Friendship</span></li>

<li class="best">Ninjitsu</span></li>

</ul>

**Write the CSS to give…**

1. All <li> tags red text

li { color: red }

1. The second ordered <li> tag blue text

#second { color: blue }

1. All unordered <li> tags green text

ul li { color: green }

1. All elements will class="best" pink text

.best { color: pink }

1. All <li> tags will class="good" that are in a unordered list purple text

ul li.good { color: purple }

**Consider page1.html:**  
  
<html>

<head>

<link href="page1.css" rel="stylesheet">

<style>

p {

color: red;

}

</style>

<title>A Sample CSS Page</title>

</head>

<body>

My

<p>Little   
 <span style="color: green">Pony</span>  
 </p>

</body>

</html>

**and page1.css:**  
  
body {  
 color: blue;  
}

p {  
 color: purple;  
}

1. What color is the word My?   
   Blue
2. What color is the word Little?   
   Red
3. What color is the word Pony?

Green

**Consider page2.html:**  
  
<html>

<head>

<link href="page2.css" rel="stylesheet">

<style>

p {

color: red;

}

</style>

<title>A Sample CSS Page</title>

</head>

<body>

<div>My  
 <p>Little  
 <span>Pony</span>  
 </p>  
 <span class="pink">Friendship</span>

</div>  
 <p>is</p>  
 Magic

</body>

</html>

**and page2.css:**  
  
p { color: orange; }

div p { color: blue; }

span { color: purple; }

.pink { color: pink; }

div { color: green; }

1. What color is the word My? Green
2. What color is the word Little? Blue
3. What color is the word Pony? Purple
4. What color is the word Friendship? Pink
5. What color is the word is? Red
6. What color is the word Magic? Black

**Consider this HTML document:**

<!DOCTYPE html>

1<html>

2<head>

3<title>Website Title</title>  
 4<meta charset="utf-8">

</head>

5<body>

6<header>

7<h1 id="top">Website Title</h1>

8<h2>Webpage Title</h2>

9<h3>Slogan</h3>

10<nav>

11<ul>

12<li>

13<a href="home.html">

14<b>Home</b>

</a>

</li>

<li>

<a href=**"**about.html">About</a>

</li>

</ul>

</nav>

</header>

15<article>

<h2>Article Title</h2>

<h3>Author Name</h3>

16<section class="intro">

<h3>Sub-title</h3>

<p><b>Paragraph</b></p>

</section>

<section class="main">

<h3>Sub-title</h3>

17<p>Paragraph.

18<img src="p1.jpg" alt="a class">

</p>

<p>Paragraph</p>

<p>Paragraph</p>

</section>

</article>

</body>

</html>

1. Circle at least 5 validation errors in the code on the left. Do not assume there are any typos, misspellings can be HTML validation errors.
2. How many HTML elements are direct "children" of the <body> element? Do NOT count grandchildren or great grandchildren. **2**
3. The <html> element is at the highest level (level 0) and the <body> and <head> elements are just below (level 1). What is the deepest level? **7**
4. Starting with the <html> element, number the first occurrence of each HTML element to count the total number of different elements used. **18**
5. How many different HTML attributes are used in the document? List them below to help count them.

**charset, id, href, class, alt, and src**

1. Write the CSS code to make the Webpage Title text red. No other text should be red. You cannot use inline CSS.

**#id { color: red }**

1. Write the CSS code to make all paragraphs in the intro section, i.e., <section class="intro"> italic. You cannot use inline CSS and no other text should be italic

section.intro p { font-style: italic }

1. Explain why it is difficult to use linked or embedded CSS to change the style of the Author Name. How you could modify the HTML to make it easier to style the author name no matter where it is or no matter how the document is structured?

The h3 element appears in different places.  
We could add an id to select it no matter  
how the document is structured.  
  
Assuming the author name always in the first h3 in the article, we could select it using:   
article li:nth-child(1)

1. Which tag is the least semantic, i.e., it describes appearance rather than meaning

a. <section> **b. <b>** c. <table> d. <ul> e. <p>

1. Explain your answer above:

**<b> describes how the text looks, i.e., bold, whereas all the other tags tell you something about the identity of the content, i.e., section, table, unordered list, paragraph**

1. Which tag is the most semantic, i.e., it is most helpful in understanding the meaning of the content

a. <font> b. <b> **c. <ol>** d. <em> e. <strong>

1. Explain your answer above:

**<ol> describe two things about the content, i.e., list and ordered, whereas Note the font tag is an obsolete tag used to give text color and weight, so it is entirely about appearance, not semantics.**

1. Why do we give HTML elements **id** attributes?

**To uniquely select the element via CSS or JavaScript selectors.**

1. Why do we give HTML elements **class** attributes?

To classify one or more elements so the group can be styled or selected using CSS or JavaScript

1. Why do we give HTML elements **href** attributes?

**To specify the URL. For example, the <link> tag specifies the URL of a stylesheet to include.**

1. Why do we give HTML elements **name** attributes**?**

**To identify form elements for traditional form submission (GET or POST method).**

1. What is the correct way to specify the character set of an HTML document?

<meta charset="name\_of\_character\_set">

1. What is the correct way to use or include an external stylesheet called "bootstrap.css"?

<link rel="stylesheet" href="bootstrap.css">

1. What is the correct way to use or include an external JavaScript file called " script.js"?

<script src="script.js">/<script>

1. <p style="text-align: center">Paragraph text.</p> is an example of **inline** CSS.
2. Linking an external stylesheet to all the pages of a website helps to create a consistent look and feel. What is another equally important reason for using linked/external stylesheets?

**To eliminate CSS code redundancy.  
To centrally control the appearance of all the web pages of a website**

**Consider this URL:** http://pm4.breimer.net/project2/admin.php?status=active

1. The URL above is : a. relative **b. absolute** c. root-relative d. universal
2. In the URL above, the name of the protocol is **http**

the name of the document is **admin.php** and

the document is in a folder named **project2**

1. In the URL above, the ? indicates
   1. The presence of PHP code in the script
   2. **The start of the URL query string also called the parameter list**
   3. That the GET method will be used by the script
   4. That the script will execute an SQL query

**Write the CSS code to do each of the following.**

1. Give all <li> elements red text but only if they are inside of an <ol> element which is inside of a <nav> element

nav ol li { color: red }

1. Give all <p> elements red text but only if they are inside of a <div> element with the class="alert"

div.alert p { color: red }

1. Make all element with the class ="box" have a 1px solid black border but only if the element is inside of a <section> element with the id="boxed\_elements"

section#boxed\_elements .box {  
 border: 1px solid black;  
}

**Write the name of the CSS property:**

1. Changes font size

**font-size**

1. Changes background color

**background-color**

1. Makes text underlined

**text-decoration**

1. Draws a decorated line around an element

**border**

1. Makes elements appear as block or inline

**display**

1. Draws a shadow to decorate text

**text-shadow**

1. Write a JavaScript function called **changeToBlue** that does the following:  
   It defines a variable called myBody that points to the document's <body> element. Use an appropriate method to select the <body> element from the document. It sets the following attribute to the selected element: style="color: blue"

function changeToBlue() {

var myBody = document.querySelector("body");

myBody.setAttribute("style", "color: blue");

}

1. Write JavaScript code to select an element with **id="Blue"** and add an event listener so when the element is clicked the **changeToBlue** function is called.

document.querySelector("#Blue").addEventListener("click", changeToBlue);

1. Write a JavaScript function called **makeList** that will generate an ordered or unordered list from an array. The function should take two parameters: an array of values and the list type. makeList(["Friendship","Love","Caring"], "ol") would return the following HTML.

<ol>  
 <li>Friendship</li>  
 <li>Love</li>  
 <li>Caring</li>  
</ol>

function makeList(arrayOfValues, type) {

var newList = document.createElement(type);

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

var newItem = document.createElement("li");

newItem.appendChild(document.createTextNode(arrayOfValues[i]));

newList.appendChild(newItem)

}

return newList;

}

1. Write a JavaScript function called **makeBinaryChoice** to create a pair of radios buttons with labels. The function should take four parameters: a label, a name and two values.   
     
   makeBinaryChoice("Color: ", "color", "Black", "Blue") would return the following HTML.  
     
   <div>  
    <label>Color: </label>  
     
    <label for="Black">Black</label>  
    <input value="Black" name="color" id="Black" type="radio">  
     
    <label for="Blue">Blue</label>  
    <input value="Blue" name="color" id="Blue" type="radio">  
   </div>

function makeBinaryChoice(label, name, value1, value2) {

var newDiv = document.createElement("div");

var newLabel = document.createElement("label");

newLabel.appendChild(document.createTextNode(label));

var label1 = document.createElement("label");

label1.setAttribute("for", value1);

label1.appendChild(document.createTextNode(value1));

var radio1 = document.createElement("input");

radio1.setAttribute("value", value1);

radio1.setAttribute("name", name);

radio1.setAttribute("id", value1);

radio1.setAttribute("type", "radio");

var label2 = document.createElement("label");

label2.setAttribute("for", value2);

label2.appendChild(document.createTextNode(value2));

var radio2 = document.createElement("input");

radio2.setAttribute("value", value2);

radio2.setAttribute("name", name);

radio2.setAttribute("id", value2);

radio2.setAttribute("type", "radio");

newDiv.appendChild(newLabel);

newDiv.appendChild(label1);

newDiv.appendChild(radio1);

newDiv.appendChild(label2);

newDiv.appendChild(radio2);

return newDiv;

}