NAME: _______________________________________________________________________

<table>
<thead>
<tr>
<th>Question</th>
<th>Points</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15+5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>
15 Points – Quick Answers. Do any 15 for full credit; do more for extra credit. Correct answers will be scored as +1, wrong answers or blank answers as 0. Give ½ for partial credit (missing quotes, semicolons, underscores, asterisks, etc., or minor syntax errors).

<table>
<thead>
<tr>
<th>CLASS C</th>
<th>What class (classful addressing) is an IP address that starts with 110?</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>How many bits are reserved for the machine identifier in a /23 CIDR address? $32 - 23 = 9$</td>
</tr>
<tr>
<td>.GIF</td>
<td>Which graphics format supports animation as well as transparency?</td>
</tr>
<tr>
<td>.BMP</td>
<td>Which graphics format is uncompressed?</td>
</tr>
<tr>
<td>.SVG</td>
<td>Which graphics format describes a scene as a list of mathematical objects?</td>
</tr>
<tr>
<td>.GIF/.PNG</td>
<td>I have a bitmap image containing fewer than 256 unique colors. Before putting it on the Web, I should convert it to which format(s)? Either is OK.</td>
</tr>
<tr>
<td>#FF0</td>
<td>What is the short hex code for Yellow?</td>
</tr>
<tr>
<td>DarkOrchid</td>
<td>What is the closest named color to #9930CF?</td>
</tr>
<tr>
<td>© or &amp;#169;</td>
<td>What is one of two ways to specify the copyright © symbol in HTML?</td>
</tr>
<tr>
<td>&lt;INS&gt;...&lt;/INS&gt;</td>
<td>What should I use instead of the deprecated &lt;U&gt;...&lt;/U&gt; tag?</td>
</tr>
<tr>
<td>Encryption</td>
<td>What makes modern telnet/ftp programs (PuTTY, WinSCP, Fugu, etc.) qualitatively different from traditional telnet/ftp programs?</td>
</tr>
<tr>
<td>YES</td>
<td>Yes or No: Can I log in to my account on elsrv3 from multiple telnet and/or multiple ftp programs simultaneously?</td>
</tr>
<tr>
<td>YES</td>
<td>Yes or No: Could I complete the COMPSCI 120 assignments if I was located in South Dakota?</td>
</tr>
<tr>
<td>YES</td>
<td>Yes or No: Could I complete the COMPSCI 120 assignments if the server was located in South Dakota?</td>
</tr>
<tr>
<td>cd public_html</td>
<td>After I first log in, what complete UNIX command do I type to open the public_html folder?</td>
</tr>
<tr>
<td>ugo+r or a+r</td>
<td>In the command chmod _____ Frog.gif, what does in the blank to add read permission to user, group, and others?</td>
</tr>
<tr>
<td>rm *.html</td>
<td>What complete UNIX command would I type to delete all .html files in the current folder?</td>
</tr>
<tr>
<td>TEXT MODE</td>
<td>If I was using ftp to copy an .html file from my computer to the server, would I perform the transfer in text mode or in binary mode?</td>
</tr>
<tr>
<td>TARGET=&quot;_blank&quot;</td>
<td>What do I add to an &lt;A HREF=&quot;...&quot;&gt; tag to get the linked page to appear in a new tab of the browser?</td>
</tr>
<tr>
<td>To get to his Web site!</td>
<td>Why did the spider cross the road? Page 354 in the Companion.</td>
</tr>
</tbody>
</table>
10 Points – Olive is defined as #808000.

A. What must I add to the red, green, and blue components of Olive to make it Gray?

5 Points. “Add 00 to red, 00 to green, 80 to blue” or “Add #000080 to color” or “Add 80 to blue”. Accept any of these.

B. What must I subtract from the red, green, and blue components of Olive to make it Green?

5 Points. “Subtract 80 from red, 00 from green, 00 from blue” or “Subtract #800000 from color” or “Subtract 80 from red”. Accept any of these.

5 Points – Typeset the following equation in HTML (notice that the \(d\) and \(t\) are in italics, and the \(a\) is bold).

\[
d = \frac{1}{2}at^2
\]

Can use \(<I>d</I> = \frac{1}{2}<B>a</B><I>t</I>&sup2;\);

Can use \(<SUP>1</SUP>&frasl;<SUB>2</SUB>\) for \(\frac{1}{2}\)

Can use \(<SUP>2</SUP>\) for \(2\)

1 point each for \(<I>d</I>, \&frac12;, <B>a</B>, <I>t</I>, and \&SUP2; or for the equivalent forms. In each case remove \(\frac{1}{2}\) point for minor syntax errors.

5 Points – Short Answer – After several failed log-in attempts, the elsrv3 server blocks the IP address of the computer from which the attempts are being made. Why? What can the user do if that happens?

2 Points: The server thinks a hacker is trying to break in.

3 Points: The user either has to wait for a couple of days for the server to clear the IP, or has to move their laptop to a different wireless access point (thus giving the laptop a new IP). Accept either explanation here.

10 Points – For each of the following style tasks, tell me whether the solution is to use the default attributes of a tag, put information in a .CSS file, put information in the STYLE block, or put information in a STYLE attribute. 2 Points each.

A. Make all H2 tags green across several Web pages. .CSS

B. Make all H1 tags centered in the current document. STYLE block

C. Make one H6 tag red, but leave all other H6 tags alone. STYLE attrib.

D. Don’t change the color of any H3 tags. Default

E. Make the background color of every Web page in the site cyan. .CSS
20 Points – Consider the following JavaScript fragment, located somewhere between <BODY> and </BODY>.

```javascript
<SCRIPT TYPE="text/javascript">
!--
document.writeln ("<TABLE BORDER>");
N = 3;
while (N > 0) {
document.writeln ("<TR><TD>", N, "</TD></TR>");
N = N - 1;
}
document.writeln ("</TABLE>");
//-->
</SCRIPT>
```

A. (10 points) What HTML code is written out into the current document when the JavaScript fragment runs? (NOT what appears on screen!)

```html
<TABLE BORDER>
<TR><TD>3</TD></TR>
<TR><TD>2</TD></TR>
<TR><TD>1</TD></TR>
</TABLE>
```

Score as 2 points per line: 0 for wrong, 1 for partial, 2 for (nearly) correct

B. (10 points) What appears on screen when the result of part A is rendered by the browser?

```
3
2
1
```

Give full 10 points if view completely matches code, 5 points for sort of correct, 8 points for mostly correct, 10 points for fully correct.

5 Points – Short Answer – What is the purpose of the <NOFRAMES>…</NOFRAMES> tag pair?

To surround HTML code that will run if the browser cannot support frames.

If the browser supports frames the text inside <NOFRAMES>…</NOFRAMES> will be ignored, but if the browser cannot support frames then the <FRAMESET>, <FRAME>, </FRAMESET>, <NOFRAMES>, and </NOFRAMES> tags will be unrecognized and ignored, exposing all text inside <NOFRAMES>…</NOFRAMES> to the browser. Score this as 0 (wrong answer), 3 (got most of it), or 5 (complete answer).
10 Points – A form called MyForm contains an input text box called MyInput. Finish the JavaScript function below to extract the string from MyInput, convert the string to a number, and then return the square of the number as the result of the function.

```javascript
function GrabItAndSquareIt () {
    S = document.MyForm.MyInput.value;
    N = parseFloat(S);
    return N * N;
}
```

Also acceptable:

```javascript
function GrabItAndSquareIt () {
    N = parseFloat(document.MyForm.MyInput.value);
    return N * N;
}
```

Score as:

3 Points: for `document.MyForm.MyInput.value`

2 Points for `parseFloat(S)`

3 Points for `return N * N`

2 Points for syntax that glues everything together (semicolons, variables, equal signs, etc.)

In each of the four cases, remove partial credit points consistently for errors in capitalization, syntax, variable usage, expressions, etc. Variables can be named anything, as long as they are used correctly throughout.
20 Points – The following image contains four objects: two circles and two rectangles, in the shape of a simple car. The gray grid (normally not shown) is at a 10-pixel spacing, and all points of interest are shown as small square dots (also normally not shown). All points are on 10-pixel boundaries (i.e., a point might be at <30,20> but not at <32,18>, for example). Complete the HTML code below to turn the image, called Car.gif, into a client side image map, where the top rectangle links to www.windows.com, the bottom rectangle links to www.bodies.com, both circles link to www.wheels.com, and the background links to www.autos.org.

```
<IMG SRC="Car.gif" USEMAP="#MyMap">

<MAP NAME="MyMap">
  <AREA SHAPE="rect" COORDS="50,20,160,60" HREF="http://www.windows.com/">
  <AREA SHAPE="rect" COORDS="20,50,170,100" HREF="http://www.bodies.com/">
  <AREA SHAPE="circle" COORDS="50,100,20" HREF="http://www.wheels.com/">
  <AREA SHAPE="circle" COORDS="140,100,20" HREF="http://www.wheels.com/">
  <AREA SHAPE="default" HREF="http://www.autos.org/">
</MAP>
```

Scoring:
Assign 4 points each for the two rect and the two circle shape lines (total of 16 points), 1 point for the file name Car.gif, and 3 points for the default shape line. In each case, assign 1 point for correct shape, 1 point for correct coordinates, 1 point for correct URL (trailing slash is optional), and 1 point for overall syntax (quotes, slashes, attribute names, etc.)

Once completely scored, remove 2 points if the order of the shapes is not top rect, bottom rect, wheel, wheel, default (the wheels can be in either order). Do not go below zero.