Section A: Multiple Choice Questions (30%)

1. In CSS, you can override precedence rules by adding the ____ property to a style declaration. (2%)
   A. !override
   B. !main
   C. !important
   D. !priority

2. What is the default value of the position property? (2%)
   A. relative
   B. absolute
   C. fixed
   D. static

3. What is one advantage that HTML5 APIs offer for modern Web design? (2%)
   A. They enable users to view Flash content on mobile devices.
   B. They enable developers to create apps without coding skills
   C. They enable older browsers to display any multimedia content
   D. They enable users to view multimedia without plug-ins

4. What is the result of the following code? (2%)

   var y = Math.floor(3.8);

   A. 3.8
   B. 4
   C. 3.5
   D. 3

5. Graphics defined by SVG is in which format? (2%)
   A. XML
   B. HTML
   C. CSS

6. What the following code will do if someone types in "18"? (2%)

   var age = prompt("Enter your age ");
   var next = age + 1;
   alert("On your next birthday, you'll be "+next);

   A. It gets an error
   B. It displays "18"
   C. It displays "19"
   D. It displays "181"

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7. How do you select all p elements inside a div element? (2%)
   A. div.p
   B. div p
   C. div + p
   D. div * p

8. How do you display a border like this: (2%)

   The top border = 10 pixels
   The bottom border = 5 pixels
   The left border = 20 pixels
   The right border = 1 pixel

   A. border-width:10px 1px 5px 20px;
   B. border-width:5px 20px 10px 1px;
   C. border-width:10px 5px 20px 1px;
   D. border-width:10px 20px 5px 1px;

9. From outside to inside, a box (block) has: (2%)
   A. border, margins, padding
   B. margins, padding, border
   C. padding, margins, border
   D. margins, border, padding

10. Which statement is true? (2%)
    A. An XML document can have one root element
    B. An XML document can have one child element
    C. XML elements have to be in lower case
    D. All of the above

11. What is one advantage that HTML5 APIs offer for modern Web design? (2%)
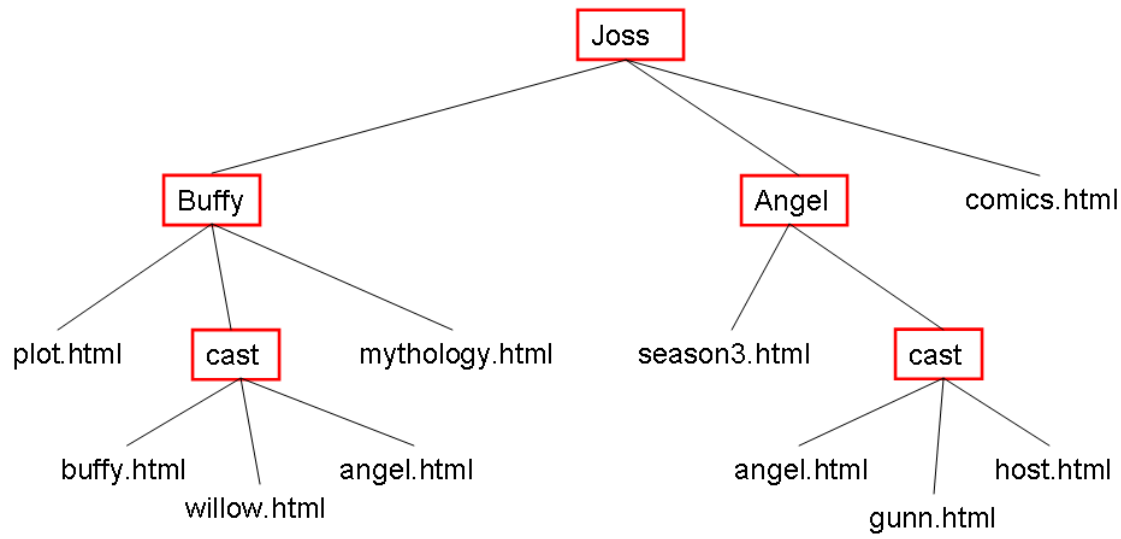   A. They enable users to view Flash content on mobile devices.
    B. They enable developers to create apps without coding skills
    C. They enable older browsers to display any multimedia content
    D. They enable users to view multimedia without plug-ins

12. Match each of the TCP/IP layers with the correct protocol. (8% -2% each)
    A. Application Layer   1) IP
    B. Transport Layer   2) WiFi
    C. Network Layer   3) TCP
    D. Physical Layer   4) HTTP

Students will find the examination results in Studentweb. Please contact the department if you have questions about your results. The Examinations Office will not be able to answer this.

Section B: Longer Answer Questions (30%)

1. You're creating a web site with the following folder and file structure:

Give the relative URL for each of the following connections (1.5% each - 6%):

A. From plot.html to mythology.html (1.5%)

B. From plot.html to buffy.html (1.5%)

C. From buffy.html to plot.html (1.5%)

D. From buffy.html to gunn.html (1.5%)

2. The following web page is loaded into a web server:

```
<html>
  <head><title>JavaScript question</title></head>
    <body>
        <script type="text/javascript">
              book = new Array(1,2,3,4,5,6,7,8);
              document.write(book[1]);
              book[10]=10;
              document.write(book[10]);
        </script>
     </body>
</html>
```
Once the above web page is loaded what will be the outcome? (4%)

3. After you have traced through the code, write the value of each variable below:

```
function dogsAge(age) {
    return age * 7;
}


var myDogsAge = dogsAge(4);


function rectangleArea(width, height) {
    var area = width * height;
    return area;
}

var rectArea = rectangleArea(3, 4);

function addUp(numArray) {
    var total = 0;
    for (var i = 0; i < numArray.length; i++) {
        total += numArray[i];
    }
    return total;
}

var theTotal = addUp([1, 5, 3, 9]);

function getAvatar(points) {
    var avatar;
    if (points < 100) {
        avatar = "Mouse";
    } else if (points > 100 && points < 1000) {
        avatar = "Cat";
    } else {
        avatar = "Ape";
    }
    return avatar;
}
var myAvatar = getAvatar(335);
```

Write the value of each variable here: (2% each - 8%)
   A. myDogsAge =
   B. rectArea =
   C. theTotal =
   D. myAvatar =

4. Describe the situations of using External Style Sheets, Embedded (Internal) Style Sheets and Inline Styles. Use both CSS and HTML code to explain how to use each type of the styles. (6%)

5. Explain the differences between POST and GET when sending HTML form data. (6%)

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Section C: Coding Related Questions (40%)

1. Write the HTML code that produces the following table. The image is called mainbuilding.jpg and is stored in a folder called images. The images folder is inside the same folder of this HTML file. (5%)

2. Consider the following HTML file:

```
------------------
<!DOCTYPE html>
<html>
<head>
<style>
…
</style>
</head>
<body>

<h1>This is a Heading </h1>
<p>This is a paragraph. </p>
<p>This is another paragraph. </p>
<p class="highlight">This is a third paragraph. </p>

<ul>
<li>Apple</li>
<li>Orange</li>
<li>Pear</li>
</ul>

</body>
</html>

------------------
```

Write the CSS needed to (10% - 2% each):
  A. Position the <h1> element 20px left, and 30px down, relative to its normal position.

  B. Position the <h1> element 50px from the left, and 100px from the top, relative to the HTML page.

  C. Display the list items as inline elements.

  D. Change the background color of the p element with the class "highlight" to "lightblue", when a user hovers over that p element.

  E. Set text color to red, for the first line of the <p> elements.

3. Write a JavaScript function that calculates the number of days left till the Christmas Date (7%).

4. Write a JavaScript program to calculate multiplication and division of two numbers (input from user). (8%)
The form will look like this:

1st Number : 12
2nd Number: 10
[Multiply] [Divide]

The Result Is :
120

The HTML is given:

```
<form>
1st Number : <input type="text" id="firstNumber" /><br>
2nd Number: <input type="text" id="secondNumber" /><br>
<input type="button" onClick="multiplyBy()" Value="Multiply" />
<input type="button" onClick="divideBy()" Value="Divide" />
</form>
<p>The Result is : <br>
<span id = "result"></span>
</p>
```
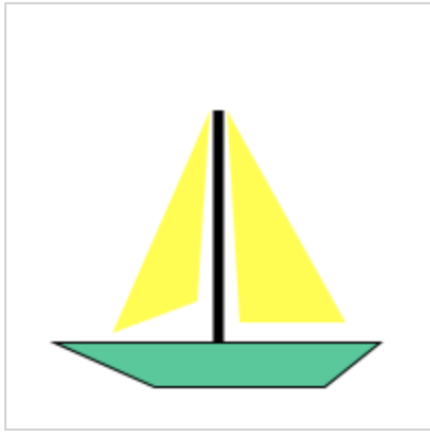

5. Write JavaScript code to draw the following figure inside a <canvas> element. (10%)
  • Don't forget to access the canvas element from your script and use the 2D drawing API.
  • We expect you to approximately draw the following figure, eg. line width, not fully centered to the canvas, color of the lines etc. are not problems.

<!DOCTYPE html>
<html> <body>
<canvas id="myCanvas" width="200" height="200" style="border:1px solid #d3d3d3;">
Your browser does not support the HTML5 canvas tag.</canvas>
<script>
…
</script>
</body> </html>