Assignment 7: Midterm

IT2805 Web Technology

NAME: _____

1. True/False (2% each), Indicate whether the sentence or statement is true or false.

a. An HTML file contains both formatting tags and content. T

b. The alt attribute in an `<img>` element is often used to include a text description of the image, which displays for non-graphical browsers. T

c. In CSS, styles specified in the web pages take precedence over user-defined styles. T (CSS2) / F (CSS1) – bonus grade both are OK since CSS is undefined!

d. By default a block level element will be displayed with a bordered box around it F

e. CSS positioning is more advantageous than `<table>` for page layout. T

2. Multiple Choice Questions (4% each).

Identify the letter of the choice that best completes the statement or answers the question.

In the URL `http://www.idi.ntntu.no/course/info.html#majors`, which part indicates an internal section of the page?
a. `http://` b. `www.idi.ntntu.no`
c. `/course/info.html`
d. `#majors`
The ____ element is used to mark a sectioning content/block within an HTML doc.

a. `<nav>`
b. `<span>`
c. `<div>`
d. `<class>`
Which of the following is NOT an inline element?

a. `<img>`

b. `<input>`

C. `<span>`

d. None of the above

In HTML tables, the number of columns is determined by

a. how many `<td>` elements are inserted within each row.

b. the width attribute of the `<tr>` element.

c. the `<col>` element.

d. none of the above.

Which of the following statements is true?

a. JPG files are limited to 256 colors.

b. PNG files only support 1 bit transparency.

c. GIF is a good format for photographs.

d. PNG uses the DEFLATE lossless compression algorithm.

3. Give the appropriate Short Answers

1. What is the syntax for creating a two row and three column HTML table? The first row has the following table headings: "Id", "Name", "Email". The contents of the second row are: "1", "Me", "tbd". (5%)

```
<table><tr>
      <th>Id</th>
      <th>Name</th>
      <th>Email</th>
   </tr>
   <tr>
      <td>1</td>
      <td>Me</td>
      <td>tbd</td>
   </tr> </table>
```

2. What does the following HTML code do? (5%)

```
<area shape="rect" coords="384,66,499,271" href="water.html">
```

It specify a rectangular area inside an image as a hotspot, when clicked, it links to water.html. The area's top left corner is (384,66) and the bottom right corner is (499, 271).

3. Write HTML code to display the image `ntnu.png` in such a way that text browsers will display "Norwegian University of Science and Technology" instead. (5%)

4. **Identify and describe four properties that are used in the CSS box model (feel free to draw a figure if you want). (5%)**
   - **Margin** - Clears an area around the border. The margin does not have a background color, it is completely transparent
   - **Border** - A border that goes around the padding and content. The border is inherited from the color property of the box
   - **Padding** - Clears an area around the content. The padding is affected by the background color of the box
   - **Content** - The content of the box, where text and images appear

Diagram from w3school.com

5. **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. (10%)

Building	Constructed	Picture
Hovedbygget	1910	
Realfagsbygget	2000	N/A

```html
<table><tr>
        <th>Building</th>
        <th>Constructed</th>
        <th>Picture</th>
</tr>
<tr>
        <td>Hovedbygget</td>
        <td>1910</td>
        <td><img src="images/mainbuilding.jpg"/></td>
</tr>
<tr>
        <td>Realfagsbygget</td>
        <td>2000</td>
        <td>N/A</td>
</tr></table>
```

6. **Develop a web-from to collect the following information (5%):** •
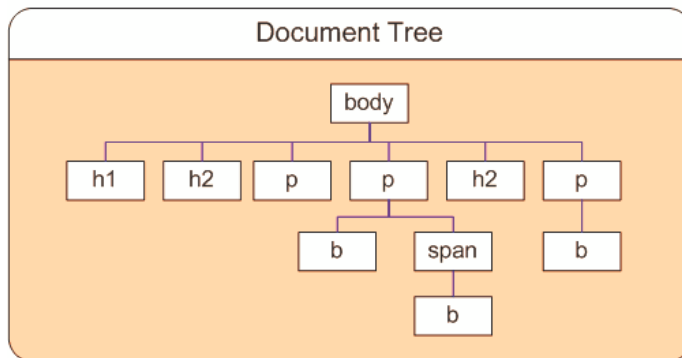   name of the student • his/her email address

```html
<label for="name">Name</label>
<input type="text" name="name" id="name">
<label for="email">E-mail</label>
<input type="email" name="email" id="email">
```

7. **Build (draw) the Document tree of the following HTML (5%)**

```html
<html><head>

<style type="text/css">

</style>

</head>

<body>
```

`<h1>` Heading 1`</h1>`

`<h2>` Heading 2.a`</h2>`

`<p>` First paragraph. `</p>`

`<p>` Second paragraph has a `<b>`bold`</b>` and a `<span>`span with
another `<b>`bold`</b></span>`. `</p>`

`<h2>` Heading 2.b`</h2>`

`<p>` Third paragraph has a `<b>`bold`</b>` also. `</p>`

`</body></html>`

8. Complete the following HTML code so that the resulting web page displays two paragraphs: "Grass is green" and "Fire is red". Use embedded styles so that the words "green" and "fire" are to be displayed in green and red color respectively. (10%)

```
<!DOCTYPE html>
<html>
    <head>
        <meta charset="UTF-8">
        <style>
                span.green {color:green}
                span.red {color:red}
        </style>
    </head>
    <body>
        <p>Grass is <span class="green">green</span></p>
        <p>Fire is <span class="red">red</span></p>
    </body>
</html>
```

9. When would you choose to use a PNG image format in preference to JPEG and why? (10%)

PNG

24 bit colors
8 bit transparency
Color and gamma correction
Allows for illusion of smooth curves.
Makes curved images look good against any background.

JPEG
is designed specifically for storing full-color or greyscale images of real-world scenes
Can store 24-bit color pictures, offering over 16 million colors.
Not transparency

10. Explain the differences between POST and GET when sending HTML form data. (10%)

GET
Send data to the server by appending it to the end of the URL
Sensitive data will be displayed as part of the URL
URL has size restrictions – not suitable for large amount of data
Query can be cached for future use Not possible for caching and bookmarking

POST
Send data as separate packets
The data is hidden from user but still in plain text, but possible to work with https.
Suitable for sending file and large amount of data for storage on the server-side
Not possible for caching and bookmarking