

# CEC 221 suggested Solutions

QUESTION 1: (25 marks)

1. MCOQ (4 marks)

30 A4 1.1. What is the correct HTML for inserting an image

ERS a) <img alt=" Myimage" image.gif/img>

UNINE b) <image src=" image.gif" alt= " MylImage">

RTWENI9 c) <img src= "image.gif" alt= " MylImage">

d) <img href=" image.gif" alt=" MylImage" >

1.2. In how many ways can CSS be written in? a) 1 b) 2

c) 3 d)4

1.3. Choose the correct HTML tag for the largest heading: a) h1

b) head c) h6 d) header

1.4. Who is making the Web standards? a) Google b) Microsoft

c) The W3C d) Netscape

2. Establish the relationship between: web, HTML, CSS and web browser. (4 marks)

Web: relies on HTML, CSS, and web browsers to create and access its content.

HTML: provides the structure for web pages that are interpreted by web browsers.

CSS: enhances the visual appearance of web pages created with HTML, displayed by web browsers.

Web Browser: reads and interprets HTML and CSS code to turn it into a visually appealing and interactive webpage for users.

3. Write the minimum script to edit an html5 page. (4 marks)

// Get a reference to the element you want to edit

```
const elementToEdit = document.getElementById("elementId"); // Replace "elementId" with the actual ID of the element
```

```
// Make changes to the element's content
```

```
elementToEdit.textContent = "New content!"; // Replace "New content!" with your desired text
```

```
// Alternatively, make changes to the element's attributes
```

```
elementToEdit.style.color = "blue"; // Change text color to blue
```

```
elementToEdit.style.display = "none"; // Hide the element
```

4. Explain this line: `<meta charset="utf-8" >`. What will happen to this page after commenting this line, when the user will refresh this Minimum script? (2.5 marks)

The `<meta charset="utf-8">` line in HTML sets the character encoding to UTF-8. Removing it may cause display issues with non-ASCII characters and language symbols. It's essential for proper text rendering across browsers and languages.

5. What does HTML and CSS stand for? (2 marks)

HTML stands for Hypertext Markup Language. CSS stands for Cascading Style Sheets.

6. Give the correct HTML line of script for referring to an external style sheet. (1.5 marks)

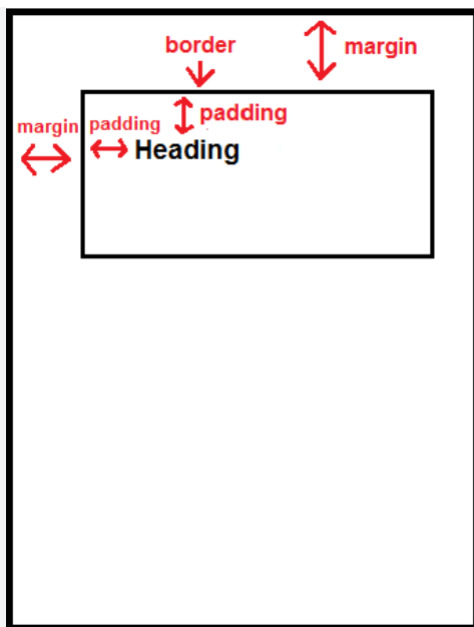
```
<link rel="stylesheet" type="text/css" href="styles.css">
```

7. Where is the correct place to refer to an external style sheet in an HTML document? (1 marks)

The correct place to refer to an external style sheet in an HTML document is within the `<head>` section

8. Give the difference between the padding and the margin (you can use a graphical representation for illustration). 2marks

Padding is the space between the content and the border of an element. Margin is the space outside the border of an element.



9. Explain how to check variables status in JavaScript code using the browser. 2marks

To check variable status in JavaScript code using the browser, you can use the browser's built-in developer tools. Here's how to do it in Google Chrome:

Open your webpage in Google Chrome.

Right-click on the webpage and select "Inspect" or press Ctrl + Shift + I (Windows/Linux) or Cmd + Option + I (Mac) to open the DevTools.

Go to the "Console" tab in the DevTools.

You can now type the variable name and press Enter to see its current value. Additionally, you can log variables using `console.log(variableName)` to print their values to the console for debugging purposes.

This method allows you to inspect the current value of variables, debug your JavaScript code, and track the flow of your program directly within the browser environment.

10, Give the difference between "z=" and "==" operators in JavaScript.

Feature	<code>z = *</code>	<code>==</code>
Purpose	Assignment	Comparison
Value manipulation	Performs multiplication before assignment	Checks for equality
Type coercion	No	Yes (can lead to unexpected results)
Example	<code>z = 3 * 2</code>	<code>z == "1"</code>
Output	<code>z</code> becomes 6	<code>z</code> becomes true (due to type coercion)

11. Which symbol is used for comments in JavaScript? 1 mark

Single-line comments (//) at the beginning of the line.

Multi-line comments (block comments): Use /\* at the beginning and \*/ at the end to enclose the comment.

## QUESTION 2 (20 marks)

1. Explain how do these scripts work? What will they display through the web browser?

1.1. `<p> <a href="mailto:name@domaine.com"><fa> myfile</p>`

1.2. `<p> <a href="myfile.zip"> send me a mail! <fa> </p>`

1.3. `<a href="http://ub.org"  </a>`

1.1. `<p> <a href="mailto:name@domaine.com"><fa> myfile</p>`

- **Functionality:** Creates a hyperlink to an email address.
- **Display:**
  - The text "myfile" will be displayed as a clickable link.
  - Clicking the link will open the user's default email client, with a new message addressed to name@domaine.com.
- **Note:** The `<fa>` tag is likely a placeholder for a font awesome icon, but it's not a standard HTML tag.

1.2. `<p> <a href="myfile.zip"> send me a mail! <fa> </p>`

- **Functionality:** Creates a hyperlink to download a file.
- **Display:**
  - The text "send me a mail!" will be displayed as a clickable link.
  - Clicking the link will initiate the download of a file named "myfile.zip".
- **Note:** There's a typo in the href attribute; it should be href="myfile.zip".

1.3. `<a href="http://ub.org"  </a>`

- **Functionality:** Creates an image hyperlink.
- **Display:**
  - An image with the source "ub.gif" will be displayed, with a size of 50x50 pixels and a border of 10 pixels.
  - The entire image will act as a clickable link.
  - Clicking the image will lead to the website "<http://ub.org>" (note the missing colon in the provided code).

2. Explain each line of these CSS scripts

2.1.

div, p (text-transform: uppercase; )

2.2.

/\* Banner \*/

#banner\_imoge {

morgin-top: 15px;

```
height: 200px;
border-radius: 5px;
background: url('images/sanfrancisco.jpg') no-repeat;
position: relative;
margin-bottom: 25px;)
```

2.3. Give the output of the following JavaScript code snippet.

```
Var a = 1;
var b = 0;
for( a=0; a<=3;a++)
{
b+=a*2;
console.log(b);
}
```

2.1. `div, p { text-transform: uppercase; }`

- **Targets:** Applies the rule to `div` and `p` elements.
- **Property:** `text-transform: uppercase;`
  - Converts all text within those elements to uppercase.

2.2. `/* Banner */`

- **Comment:** A comment explaining the following section targets a banner element.

2.3. `#banner_image { ... }`

- **Targets:** Applies the rules to an element with the ID `"banner_image"`.
- **Properties:**
  - `margin-top: 15px;`
    - Creates a 15-pixel space above the element.
  - `height: 200px;`
    - Sets the element's height to 200 pixels.
  - `border-radius: 5px;`

- Rounds the element's corners with a 5-pixel radius.
- background: url('images/sanfrancisco.jpg') no-repeat;
  - Sets the background image to "images/sanfrancisco.jpg" and prevents it from repeating.
- position: relative;
  - Allows for positioning of child elements relative to this element.
- margin-bottom: 25px;
  - Creates a 25-pixel space below the element.

### 2.3. JavaScript Code Output:

The output of the JavaScript code snippet will be:

```
0
2
6
12
```

Explanation:

#### 1. Initialization:

- The variable a is initialized to 1.
- The variable b is initialized to 0.

#### 2. Loop:

- The for loop starts with a = 0 and continues as long as a is less than or equal to 3.
- Inside the loop:
  - `b += a * 2`: The value of a is multiplied by 2 and added to the current value of b.
  - `console.log(b)`: The current value of b is printed to the console.

#### 3. Iterations:

- Iteration 1:  $a = 0$ ,  $b = 0 + (0 * 2) = 0$ , output: 0
- Iteration 2:  $a = 1$ ,  $b = 0 + (1 * 2) = 2$ , output: 2
- Iteration 3:  $a = 2$ ,  $b = 2 + (2 * 2) = 6$ , output: 6
- Iteration 4:  $a = 3$ ,  $b = 6 + (3 * 2) = 12$ , output: 12

4. End:

- The loop ends after  $a$  becomes 4, as it no longer satisfies the condition  $a \leq 3$ .

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