Q.1. What is CSS?

1) CSS stands for **Cascading Style Sheets.**

2) CSS describes how HTML elements are displayed on screen.

3) CSS can be written in several ways:

- o **Inline CSS:** Inside individual HTML elements.
- o **Embedded CSS:** Using the <style> tag in the <head> section.
- o **External CSS:** Separated CSS file.

1) Inline CSS:

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="UTF-8">
        <title>Inline CSS Example</title>
    </head>
    <body>
        <h1 style="color: blue;">This is a Heading</h1>
        <p style="font-size: 16px;">This is a paragraph.</p>
    </body>
</html>
```

2) Embedded CSS:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Embedded CSS Example</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f0f0f0;
        }
```

```
        h1 {
            color: blue;
        }
        p {
            font-size: 16px;
        }
    </style>
</head>

<body>
    <h1>This is a Heading</h1>
    <p>This is a paragraph.</p>
</body>
</html>
```

3) External CSS:

This is a Heading

This is a paragraph.

Page.html

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <title>External CSS Example</title>
    <link rel="stylesheet" href="style.css">
</head>

<body>
    <h1>This is a Heading</h1>
    <p>This is a paragraph.</p>
</body>
</html>
```
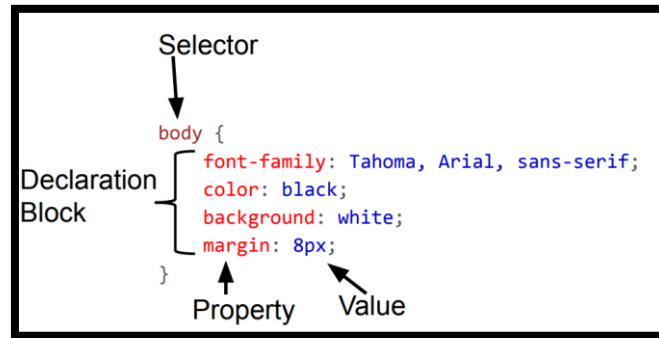
Style.css

```
body {
    font-family: Arial, sans-serif;
    background-color: #f0f0f0;
}

h1 {
    color: blue;
}

p {
    font-size: 16px;
}
```

Q.2. Define the CSS selectors.

CSS Selector	CSS	HTML

Tag name	`h1 {`
	`    color: red;`
	`}`
		`<h1>Today's Specials</h1>`

Class attribute	`.large {`
	`    font-size: 16pt;`
	`}`
		`<p class="large">...`

Tag and Class	`p.large {...}`	`<p class="large">...`

Element id	`#p20 {`
	`    font-weight: bold;`
	`}`
		`<p id="p20">...`

CSS Pseudo Selectors

hover - Apply rule when mouse is over element (e.g. tooltip)

```
p:hover, a:hover {
  background-color: yellow;
}
```

`a:link, a:visited` - Apply rule when link has been visited or not visited (`link`)

```
a:visited {              a:link {
  color: green;            color: blue;
}                        }
```

Q.3. Write the necessary HTML and CSS for the following.

First Section Heading

Here is the first paragraph, containing text that really doesn't have any use or meaning; it just prattles on and on, with no end whatsoever, no point to make, really no purpose for existence at all.

Another Section Heading

Another paragraph.

```css
body {
  font-family: Tahoma, Arial, sans-serif;
  font-size: 13px;
  color: black;
  background: white;
  margin: 8px;
}
h1 {
  font-size: 19px;
  margin-top: 0px;
  margin-bottom: 5px;
  border-bottom: 1px solid black
}
.shaded {
  background: #d0d0ff;
}
```

```html
<body>
  <h1>First Section Heading</h1>
  <p>
    Here is the first paragraph, containing
    text that really doesn't have any use
    or meaning; it just prattles on and on,
    with no end whatsoever, no point to
    make, really no purpose for existence
    at all.
  </p>
  <div class="shaded">
    <h1>Another Section Heading</h1>
    <p>
      Another paragraph.
    </p>
  </div>
</body>
```

Q.4. What is the different ways for selecting color in CSS?

Color - Properties: color & background_color

Must ultimately turn into red, green, and blue intensities between 0 and 255:

- Predefined names: red, blue, green, white, etc. (140 standard names)
- 8-bit hexadecimal numbers for red, green, blue: #ff0000
  R G B
- 0-255 decimal intensities: rgb(255,255,0)
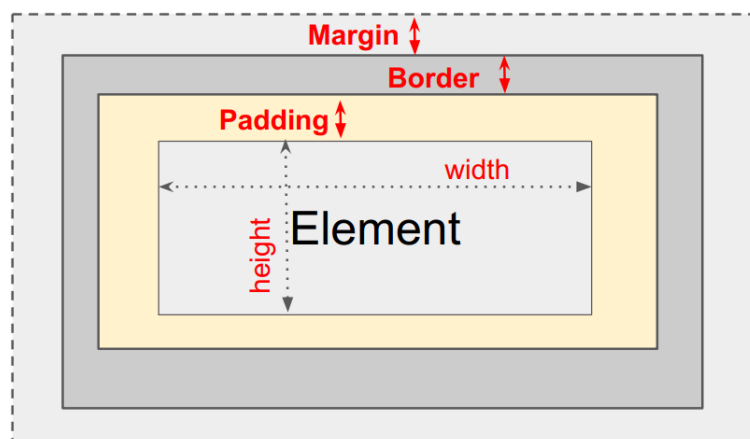 R G B
- Percentage intensities: rgb(80%,80%,100%)
  R G B

Example: h1: { color: red; }

Q.5. Define the CSS Box Model

CSS Box Model

Margin
Border
Padding
width
height
Element

Q.6. State the CSS distance units.

CSS distance units	Absolute	
	2px	pixels
	1mm	millimeters
	2cm	centimeters
	0.2in	inches
	3pt	printer point 1/72 inch
	Relative	
	2em	2 times the element's current font size
	3rem	3 times the root element's current font size

Q.7. Give an example to show the difference between em and rem

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>em and rem Example</title>
    <style>
        body {
            font-size: 16px;
        }
        .parent {
            font-size: 1.2em;
        }
        .box-em {
            font-size: 2em;
            width: 100px;
            height: 100px;
            background-color: lightblue;
            margin: 20px;
            padding: 10px;
        }
        .box-rem {
            font-size: 1.5rem;
            width: 100px;
            height: 100px;
            background-color: lightgreen;
            margin: 20px;
            padding: 10px;
        }
    </style>
</head>
<body>
    <div class="parent">
        <div class="box-em">This is a box with font size 2em.</div>
    </div>
    <div class="box-rem">This is a box with font size 1.5rem.</div>
</body>
</html>
```