**FSJS2,0 - PLACEMENT ASSIGNMENT KAPIL SARKAR**

**HTML—->**

**ANSWER .1- <!DOCTYPE html> is a specific type tag in HTML called Document Type Declaration (DTD), and it is used to specify the browser the version of HTML or XML that the document is written in.**

**ANSWER .2- Semantic tags in HTML are elements introduced in HTML5 that are used to convey the structure and purpose of the content within a web page. With semantic tags, the readability of the code increases and our webpage becomes more SEO-friendly. Examples of semantic tags are nav, header, main, footer, article,aside,section etc.**

**ANSWER .3- HTML tags are the individual markup components that define the structure and semantics of the documents whereas, HTML elements consist of the opening and closing tags, along with the content they enclose, and represent the actual components and parts of a webpage.**

**Example of tags: <p></p>**

**Example of element: <p>Hello World!</p>**

**ANSWER .4-** [**https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT\_KAPIL-SARKAR/tree/main/HTML/Q.4%20RESUME**](https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT_KAPIL-SARKAR/tree/main/HTML/Q.4%20RESUME)

**ANSWER. 5 -** [**https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT\_KAPIL-SARKAR/tree/main/HTML/Q.5%20HTML%20CODE%20FOR%20IMAGE**](https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT_KAPIL-SARKAR/tree/main/HTML/Q.5%20HTML%20CODE%20FOR%20IMAGE)

**ANSWER .6 - HTML5 introduced several significant improvements and new features over its previous versions. Some of them are listed below:**

**1 Improved semantics with semantic tags**

**2 Support of multimedia with video tag**

**3 Support of canvas**

**4 More input options in the form**

**5 Improved accessibility**

**ANSWER . 7 -** [**https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT\_KAPIL-SARKAR/tree/main/HTML/Q.7%20AUDIO%20PLAYER**](https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT_KAPIL-SARKAR/tree/main/HTML/Q.7%20AUDIO%20PLAYER)

**ANSWER . 8 - The <img> tag is a self-closing tag used to embed an image in an HTML document. It is used to display a single image on a web page.**

**Example: <img src="image.jpg" alt="An image">**

**The <figure> tag is used to encapsulate and provide semantic meaning to a self-contained content block, such as an image or multimedia object, along with an optional caption.**

**ANSWER .9. - An HTML tag represents an element in an HTML document. Tags are used to define the structure and content of a web page whereas attributes provide additional information about an HTML element. Attributes are used within the opening tag of an element to specify characteristics or properties of the element.**

**Some of the global attributes are:**

**1 id**

**2 class**

**3 style**

**4 title**

**5 lang**

**6 data**

**ANSWER.10. -** [**https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT\_KAPIL-SARKAR/tree/main/HTML/Q10.TABLE**](https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT_KAPIL-SARKAR/tree/main/HTML/Q10.TABLE)

**CSS—->**

**ANSWER.1 . - The Box Model is like creating boxes around all the HTML elements. It helps in calculating elements dimensions.The padding.margin.border,width and height. Every block level element we put on the screen is box.**

**ANSWER.2 . - CSS provides various types of selectors that allow us to target specific elements or groups of elements on a web page. Different types of selectors are :**

1. **· Element selector- Element selector selects elements specifically by their name. Example - h1,h2,p**
2. **Class selector - Class selector denoted by dot (.) followed by the class name ex- hero-section**
3. **Id selector denoted by pound (#) by the id name. Example #hero-section**
4. **Attribute selector - Attribute selector selects element based on the attribute values ex- (type=”submit”)**
5. **Pseudo class selector - It selects elements based on specific states denoted by (;) ex: hover all selector helps to make dynamic styling and user interface on the web page.**
6. **Pseudo element selectors – It selects specific part of an element . They are denoted by double colon(::) followed by pseudo elements name.**

**Advantages of using selectors - By using CSS selectors, we can select specific elements or group of elements from our webpage and style them using CSS.**

**ANSWER .3. VW (viewport width) and VH (viewport height) are units of measurement in CSS that allow you to specify sizes relative to the viewport dimensions or to the screen in which our webpage is displayed. The main difference between VW/VH and PX is that VW/VH are relative units that scale with the viewport size, while PX is an absolute unit that remains fixed regardless of the viewport dimensions.**

**ANSWER.4. Inline elements only occupy the space necessary to contain their content. They also do not create line breaks before or after themselves.**

**Block elements start on a new line and occupy the full width available within their parent container. They create line breaks before and after themselves.**

**Inline-block elements are a hybrid of inline and block elements, allowing them to have width, height, and other box properties while still being able to sit beside other elements horizontally.**

**ANSWER. 5. Border Box:**

**(i) With box-sizing: border-box, the width and height of an element are calculated including its content, padding, and border.**

**(ii) The width and height specified for an element in CSS represent the dimensions of the border box.**

**(iii) The padding and border are included within the specified width and height, so they do not increase the overall size of the element.**

**Content Box:**

**(i) With box-sizing: content-box, the width and height of an element are calculated based on its content box alone.**

**(ii) The width and height specified for an element in CSS represent the dimensions of the content box.**

**(iii) Any padding or border added to the element is added to the specified width and height, increasing the overall size of the element.**

**ANSWER .6. - Initially z-index will be zero(0) ou auto.It is a CSS property that controls the stacking order of elements on web page. The higher the z-index value indicating that an element should appear on top of elements with lower z-index. When position property is being given to any element then only z-index will work except position static because by default position of any element is static. When every element is being given the same position property i.e relative then we can bring any element on top by giving z-index. By giving negative z-index the element will go backward.**

**ANSWER . 7. - Grid and Flexbox are two CSS layout systems that provide powerful capabilities for creating responsive and flexible layouts. While they both serve similar purposes, they have different approaches and are suited for different use cases.**

**Flexbox:**

**Flexbox, short for Flexible Box Layout, is a one-dimensional layout system that focuses on arranging elements in a row or a column. It provides an easy way to create flexible and dynamic layouts, especially for building components like navigation bars, flexible content containers, or vertically aligned elements.**

**Key features of Flexbox:**

**One-dimensional: Flexbox operates in a single dimension either horizontally or vertically.**

**· Flex container and flex items: The parent element becomes a flex container by applying display: flex, and the child elements within it become flex items.**

**· Flexibility: Flexbox provides flexible resizing and alignment options for the flex items, allowing them to expand, shrink, and adjust their size based on available space.**

**· Main and cross axis: Flexbox operates along two axes - main axis (horizontal or vertical) and cross axis (perpendicular to the main axis).**

**· Alignment and ordering: Flexbox offers powerful alignment and ordering properties to control the alignment, spacing, and order of flex items.**

**Grid:**

**CSS Grid Layout, commonly known as Grid, is a two-dimensional layout system that enables precise control over both rows and columns. It allows for creating complex grid-based layouts with ease, making it suitable for creating overall page layouts, responsive grids, and grid-based designs.**

**Key features of Grid:**

**· Two-dimensional: Grid operates in both rows and columns simultaneously, allowing for complex grid-based layouts.**

**· Grid container and grid items: The parent element becomes a grid container by applying display: grid, and the child elements within it become grid items.**

**· Grid tracks and grid cells: Grid defines a grid structure using rows and columns, forming grid tracks, and each cell within the grid is a grid cell.**

**· Explicit positioning: Grid provides fine-grained control over the placement and sizing of grid items through explicit positioning using grid lines and grid areas.**

**· Alignment and spanning: Grid offers powerful alignment and spanning capabilities, allowing for easy control over item placement and spanning multiple grid cells.**

**ANSWER. 8. -** [**https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT\_KAPIL-SARKAR/tree/main/CSS/Q.8%20PERIODIC%20TABLE**](https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT_KAPIL-SARKAR/tree/main/CSS/Q.8%20PERIODIC%20TABLE)

**ANSWER .9. -** [**https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT\_KAPIL-SARKAR/tree/main/CSS/Q9.%20LAYOUT%20DESIGN**](https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT_KAPIL-SARKAR/tree/main/CSS/Q9.%20LAYOUT%20DESIGN)

**ANSWER .10 .-** [**https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT\_KAPIL-SARKAR/tree/main/CSS/Q.10%20RESPONSIVE%20LAYOUT**](https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT_KAPIL-SARKAR/tree/main/CSS/Q.10%20RESPONSIVE%20LAYOUT)

**ANSWER . 11 . -** [**https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT\_KAPIL-SARKAR/tree/main/CSS/Q.11%20INEURON%20CLONE**](https://github.com/kapilsarkar/PLACEMENT-ASSIGNMENT_KAPIL-SARKAR/tree/main/CSS/Q.11%20INEURON%20CLONE)

**ANSWER .12. Pseudo-classes are used to select and style elements based on certain states or conditions. They represent a specific state of an element or its relationship to the document or user interaction. Pseudo-classes are denoted by a single colon (:) followed by the name of the pseudo-class.  
 Example:  
 :hover: Selects an element when the user hovers over it.**

**:active: Selects an element when it is being activated (e.g., clicked).**

**:focus: Selects an element when it has keyboard focus.**

**:first-child: Selects the first child element of its parent.**

**:nth-child(n): Selects elements based on their position in the parent.**

**JAVASCRIPT —->**

**ANSWER.1. Hoisting is a phenomenon in Java Script by which we can access variables and functions even before the initialisation of variables and functions.**