Q1: Multiple Choice Questions (10 minutes)   [CLO 1]{10}

1. Which of the following best describes the primary purpose of semantic HTML tags like <article>, <nav>, and <aside>?
   a. To apply default styling to web page sections.
   b. To improve website performance by reducing DOM size.
   c. To execute JavaScript code for specific page sections.
   d. To provide meaning and structure to content for browsers, developers, and assistive technologies.

2. A CSS rule `div#main-content p.highlight` targets a paragraph. If another rule `div.container .highlight` also targets the same paragraph, and both set the color property, which rule will generally take precedence, assuming they are in the same stylesheet?
   a. div.container .highlight
   b. The rule that appears later in the CSS file
   c. div#main-content p.highlight
   d. Neither, the browser will prompt for a resolution

3. In the CSS Box Model, what is the correct order of layers from the innermost to the outermost?
   a. Content, Margin, Border, Padding
   b. Content, Padding, Border, Margin
   c. Padding, Content, Border, Margin
   d. Margin, Border, Padding, Content

4. What is the primary function of the Domain Name System (DNS) in the context of web browsing?
   a. To encrypt data transmitted between the client and server.
   b. To translate human-readable domain names (e.g., www.example.com) into IP addresses.
   c. To define the structure and content of web pages using HTML.
   d. To manage the layout and styling of web pages using CSS.

5. Consider the following JavaScript code: `function outer() { let x = 10; function inner() { console.log(x); } return inner; } const myFunc = outer(); myFunc();` What concept does this demonstrate?
   a. Hoisting
   b. Event Bubbling
   c. Closure
   d. Prototypal Inheritance

6. When designing a responsive website "mobile-first", what is the general approach?
   a. Design the desktop version first, then use media queries to scale it down for mobile.
   b. Design the mobile version first with base styles, then use media queries with min-width to add complexity for larger screens.
   c. Use JavaScript to detect the device type and serve different HTML files.
   d. Focus only on mobile design, as desktop usage is declining.

7. Which HTTP method is typically used to request data from a specified resource without altering it?
   a. POST
   b. PUT
   c. DELETE
   d. GET

8. In CSS Flexbox, what is the primary purpose of the `justify-content` property when applied to a flex container?
   a. To align flex items along the cross-axis.
   b. To align flex items along the main-axis.
   c. To control the spacing between flex lines if items wrap.
   d. To define the default size of flex items.

9. What does the `DOMContentLoaded` event signify in JavaScript when working with the DOM?
   a. The entire webpage, including all images and stylesheets, has fully loaded.
   b. The initial HTML document has been completely loaded and parsed, without waiting for stylesheets, images, and subframes to finish loading.
   c. A JavaScript error has occurred, and the DOM is now in a stable error state.
   d. The user has interacted with the page for the first time.

10. Which of the following is NOT a valid way to select an HTML element with the ID myElement using JavaScript?
    a. document.getElementById('myElement')
    b. document.querySelector('#myElement')
    c. document.querySelectorAll('#myElement')[0]
    d. document.getElementsByTagName('myElement')