

Q1: Multiple Choice Questions (30 minutes)

[CLO 1]{10}

1. Which of the following best describes the fundamental difference between the Internet and the World Wide Web?
 - a. The Internet is a collection of interconnected documents, while the WWW is the physical network infrastructure.
 - b. The Internet is primarily for communication, while the WWW is for data storage.
 - c. There is no conceptual difference; they are interchangeable terms.
 - d. The Internet is a global network of computers, while the WWW is a system of interconnected documents accessed via the Internet.
2. When you type a URL into your browser, what is the primary role of the Domain Name System (DNS) in enabling you to view the webpage?
 - a. To translate the human-readable domain name into an IP address that computers can understand and locate.
 - b. To determine the specific Top-Level Domain (TLD) of the website, such as .com or .org.
 - c. To establish a secure HTTP connection, verifying the website's authenticity.
 - d. To encrypt the data transfer between your browser and the server, ensuring security.
3. You have defined a CSS rule for 'p' elements in an external stylesheet, another in an internal '<style>' block, and an inline style directly on a specific '<p>' tag. Which of these layers of CSS application will generally take precedence for that specific '<p>' tag?
 - a. The rule in the internal '<style>' block, as it is part of the HTML document itself.
 - b. The rule in the external stylesheet, due to being loaded first.
 - c. The inline style attribute, because it is directly attached to the element and has the highest specificity.
 - d. The rule with the most specific selector, regardless of its location.
4. In the CSS Box Model, if you want to have gap between the content area and the element's border, which property would you adjust?
 - a. 'margin'
 - b. 'padding'
 - c. 'border-spacing'
 - d. 'outline'
5. When designing a web form, what is the purpose of using the 'required' attribute on an input field?
 - a. To automatically focus the cursor on this input field when the page loads, for user convenience.
 - b. To provide a default value for the input field if the user leaves it blank.
 - c. To ensure that the input field's data is encrypted before being sent to the server.
 - d. To enforce that the user must provide a value for this field before the form can be successfully submitted, improving data integrity.
6. You are conceptually designing a component where a series of items need to be arranged in a single row or column, and you want them to distribute available space flexibly, with options for alignment and justification. Which CSS layout model is conceptually best suited for this one-dimensional arrangement and flexible spacing?
 - a. 'flexbox'
 - b. 'float'
 - c. 'position: absolute;'
 - d. 'display: block;'
7. When adopting a 'mobile-first' approach to responsive web design, what is the core strategy regarding styling?
 - a. You should only use percentage-based units for all dimensions to ensure content scales universally.
 - b. You should write all CSS styles for large screens first, then use media queries for smaller screens.
 - c. You should avoid using media queries altogether, relying solely on fluid units for responsiveness.
 - d. You should write basic, fundamental styles for the smallest screen size, and then use media queries to progressively add and enhance styles for larger screens.
8. You want to apply a visual effect to an image element, such as converting it to grayscale or blurring it, without altering the original image file. Which CSS property family is specifically designed for these types of visual post-processing effects?
 - a. 'transition'
 - b. 'filter'
 - c. 'animation'
 - d. 'transform'
9. When considering the advantage of using Tailwind CSS utility classes (e.g., 'p-4' for padding) instead of writing custom CSS, what is the primary benefit to a developer?
 - a. It generates entirely new CSS properties that are not available in standard CSS, offering unique styling capabilities.
 - b. It promotes writing highly specific and verbose CSS rules, which are easier to debug.
 - c. It provides a set of pre-defined, single-purpose classes that directly apply CSS properties, leading to faster development, greater consistency, and easier maintainability.
 - d. It completely eliminates the need for any HTML structure, simplifying development.

---Remaining MCQs are on the backside of this page---

10. When creating an HTML document, what is the difference in how a browser handles an image specified with an `*absolute path*` versus a `*relative path*`?
 - a. A relative path is preferred for images hosted on external servers, while absolute paths are for local images.
 - b. An absolute path is always faster for the browser to resolve because it's a direct link.
 - c. An absolute path provides the full URL to the image on the web, while a relative path specifies the image's location based on the current document's position.
 - d. The browser will always download absolute path images first, before relative path images.
11. What is the primary benefit of using CSS variables (custom properties)?
 - a. They simplify the process of defining and reusing consistent values (like colors or font sizes) across a large stylesheet, enhancing maintainability and theming capabilities.
 - b. They are primarily used for creating complex animations and transitions.
 - c. They allow for dynamic adjustment of values in JavaScript, making it impossible to change styles without server-side interaction.
 - d. They enable developers to create new CSS properties that are not part of the standard CSS specification.
12. What is the main benefit of using CSS pre-processors (like Sass or Less) compared to writing raw CSS?
 - a. They allow for direct manipulation of the DOM elements without using JavaScript.
 - b. They introduce programming-like features (variables, nesting, mixins, functions) to CSS, making stylesheets more organized, maintainable, and efficient to write.
 - c. They eliminate the need for any external stylesheets, embedding all styles directly into HTML.
 - d. They allow developers to write CSS that is automatically optimized for all browser compatibility.
13. Your CSS file resides two levels up from your page under `/assets/css/style.css`. Which reference inside a page at `/posts/2025/may/index.html` is correct?
 - a. `<link href="../../assets/css/style.css">`
 - b. `<link href="/posts/2025/assets/css/style.css">`
 - c. `<link href="../../assets/css/style.css">`
 - d. `<link href="/assets/css/style.css">`
14. For responsive typography that scales with user zoom, which unit is most appropriate?
 - a. px
 - b. em
 - c. cm
 - d. vh
15. Given conflicting rules `div p {...}`, `.highlight p {...}`, and `#main p {...}`, which always wins for a `<p>` inside `<div id="main" class="highlight">`?
 - a. `div p`
 - b. `.highlight p`
 - c. `#main p`
 - d. The one that appears last in the stylesheet
16. You want to style only `<a>` elements inside `<nav>` but not those in `<footer>`. Which selector fits?
 - a. `nav, footer a {...}`
 - b. `nav a {...}`
 - c. `a.nav {...}`
 - d. `:scope > a {...}`
17. Two adjacent `<div>`s each have `width: 200px; padding: 10px; border: 5px solid; margin: 20px;`. What is their total occupied horizontal space including margin?
 - a. 200 px
 - b. 230 px
 - c. 270 px
 - d. 470 px
18. You've defined `:root { --main-color: #3498db; }`. To style headings uniformly, which is the best use?
 - a. `h1 { color: var(main-color); }`
 - b. `h1 { color: --main-color; }`
 - c. `h1 { color: var(--main-color); }`
 - d. `h1 { color: root(--main-color); }`
19. For a multi-column form that must degrade gracefully, which approach is most robust?
 - a. Use `<table>` for layout.
 - b. Float `<label>` and `<input>` pairs.
 - c. CSS Grid with `minmax()` and media queries.
 - d. Position inputs absolutely.
20. To style every other row in a table with a light gray background, which CSS is most maintainable?
 - a. `tr:nth-child(odd) { background: #f2f2f2; }`
 - b. `tr.alternate { background: #f2f2f2; }`
 - c. `td:first-child { background: #f2f2f2; }`
 - d. `table { border-collapse: separate; }`