

Web Application Development (Objective)

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 `

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 relative path is preferred for images hosted on external servers, while absolute paths are for local images.
 - An absolute path is always faster for the browser to resolve because it's a direct link.
 - 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.
 - 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)?
- They simplify the process of defining and reusing consistent values (like colors or font sizes) across a large stylesheet, enhancing maintainability and theming capabilities.
 - They are primarily used for creating complex animations and transitions.
 - They allow for dynamic adjustment of values in JavaScript, making it impossible to change styles without server-side interaction.
 - 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?
- They allow for direct manipulation of the DOM elements without using JavaScript.
 - They introduce programming-like features (variables, nesting, mixins, functions) to CSS, making stylesheets more organized, maintainable, and efficient to write.
 - They eliminate the need for any external stylesheets, embedding all styles directly into HTML.
 - 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?
- <link href="../../assets/css/style.css">
 - <link href="/posts/2025/assets/css/style.css">
 - <link href="../assets/css/style.css">
 - <link href="/assets/css/style.css">
14. For responsive typography that scales with user zoom, which unit is most appropriate?
- px
 - em
 - cm
 - vh
15. Given conflicting rules `div p { ... }`, `.highlight p { ... }`, and `#main p { ... }`, which always wins for a `<p>` inside `<div id="main" class="highlight">?`
- `div p`
 - `.highlight p`
 - `#main p`
 - 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?
- `nav, footer a { ... }`
 - `nav a { ... }`
 - `a.nav { ... }`
 - `: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?
- 200 px
 - 230 px
 - 270 px
 - 470 px
18. You've defined `:root { --main-color: #3498db; }`. To style headings uniformly, which is the best use?
- `h1 { color: var(main-color); }`
 - `h1 { color: --main-color; }`
 - `h1 { color: var(--main-color); }`
 - `h1 { color: root(--main-color); }`
19. For a multi-column form that must degrade gracefully, which approach is most robust?
- Use `<table>` for layout.
 - Float `<label>` and `<input>` pairs.
 - CSS Grid with `minmax()` and media queries.
 - Position inputs absolutely.
20. To style every other row in a table with a light gray background, which CSS is most maintainable?
- `tr:nth-child(odd) { background: #f2f2f2; }`
 - `tr.alternate { background: #f2f2f2; }`
 - `td:first-child { background: #f2f2f2; }`
 - `table { border-collapse: separate; }`