Answer Key: Build Bolder Backend-Free Websites: 10th Grade Web Dev Quiz

Students analyze DOM manipulation, semantic structure, and responsive design logic across 10 challenging web development scenarios.

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1. When designing for accessibility, which HTML attribute is most crucial for providing context to screen readers when an image is used as a functional link?

Answer: C) alt

> The 'alt' attribute provides essential text alternatives for non-text content, ensuring that users with visual impairments understand the purpose of images.

2. In the CSS Box Model, which property creates space outside of an element's defined border, separating it from adjacent elements?

Answer: B) Margin

> While padding adds space inside the element (buffer for text), margin represents the transparent area outside the border that pushes other elements away.

3. In JavaScript, the 'const' keyword allows a developer to declare a variable that can be reassigned to a new value later in the script.

Answer: B) False

> Variables declared with 'const' are block-scoped and cannot be reassigned; 'let' or 'var' must be used if the value needs to change.

4. Which CSS layout module is specifically designed for a one-dimensional layout, distributing space along either a single row or a single column?

Answer: C) Flexbox

> Flexbox is ideal for single-axis layouts (row OR column), whereas CSS Grid is intended for two-dimensional layouts (rows AND columns).

5. To change the text of an HTML element with the ID 'status' using JavaScript, a developer would use the _____ property of the DOM object.

Answer: A) innerHTML

> The 'textContent' or 'innerHTML' properties allow developers to access or modify the content between the opening and closing tags of an HTML element.

6. The <section> and <article> tags in HTML5 are semantic elements that convey meaning to the browser and search engines about the type of content they contain.

Answer: A) True

> Semantic HTML tags like <section>, <article>, and <nav> describe their meaning to both the browser and the developer, improving SEO and accessibility.

7. When applying styles, which of the following CSS selectors has the highest level of 'specificity'?

Answer: D) ID Selectors (#unique-id)

> In the CSS cascade, ID selectors are more specific and override class selectors, which in turn override element selectors.

8. In JavaScript, a(n) _____ is a data structure used to store an ordered list of values, accessed via numerical indices starting at 0.

Answer: C) Array

> Arrays are zero-indexed collections used to store multiple items under a single variable name, ideal for lists like navigation items or user lists.

9. Which CSS property is used to create a responsive layout by checking the width of the user's viewport?

Answer: A) @media

> Media queries (@media) allow CSS to be applied only if certain conditions are met, such as a screen width being smaller than 600px for mobile devices.

10. JavaScript is an interpreted language, meaning the code is executed line-by-line by the browser's engine rather than compiled into a separate binary file before running.

Answer: A) True

> Browsers use engines like V8 (Chrome) or SpiderMonkey (Firefox) to interpret and execute JavaScript directly as the page loads.