Name: _____   Date: _____

Answer Key: Stunning Synthesized Sites: Seven Scripts and Styles for 7th Grade

Analyze ten complex scenarios involving the Document Object Model, CSS specificity hierarchies, and asynchronous logic to troubleshoot and optimize modern web architecture.

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1. A developer applies 'color: red !important' to a paragraph in an external stylesheet, but an inline style on the HTML element sets 'color: blue'. Later, a CSS ID selector sets 'color: green'. What color is the text?

Answer: C) Red, because the !important flag overrides the standard cascade hierarchy.

> In the CSS Cascade, the !important rule is a 'power move' that overrides specificity and source order, including inline styles.

2. In the Box Model, if an element has a width of 200px, a padding of 20px on all sides, and a border of 5px, the total calculated horizontal space it occupies is ___.

Answer: B) 250px

> Total width = content (200) + left/right padding (40) + left/right border (10) = 250px.

3. Which JavaScript method would you use to change the text content of an HTML element after identifying it by its unique identifier in the DOM?

Answer: C) getElementById().textContent

> getElementById targets a specific ID, and .textContent is the standard property for altering the text inside that element node.

4. The HTML <iframe> element is primarily used to create a semantic break between different thematic sections of a single document.

Answer: B) False

> An <iframe> is used to embed another document (like a map or video) within the current HTML page, not for thematic breaks.

5. You are building a site for a high-contrast mode. Which CSS property allows you to change the background color of an element only when a user hovers over it?

Answer: B) element:hover

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> The :hover pseudo-class specifically targets the state where a pointing device is over an element.

6. To ensure an image is accessible to screen readers for visually impaired users, the developer must include the ___ attribute within the <img> tag.

Answer: C) alt

> The 'alt' (alternative text) attribute provides a textual description of the image for accessibility and SEO.

7. In JavaScript, the 'const' keyword is used to declare a variable that can be reassigned a new value later in the code execution.

Answer: B) False

> 'const' creates a read-only reference to a value; it cannot be reassigned. Use 'let' for variables that need to change.

8. Which of the following is the most efficient way to apply a shared font-style to all level-one headings, level-two headings, and paragraphs simultaneously?

Answer: B) h1, h2, p { font-family: sans-serif; }

> Using a comma-separated list of selectors allows you to apply the same group of styles to multiple different elements.

9. If you want to trigger a JavaScript function when a user submits a form, you should attach an event listener for the ___ event.

Answer: C) onsubmit

> The 'submit' event is specific to form interactions and allows for data validation before the data is sent to a server.

10. The <div> element is considered a semantic tag because it clearly describes the meaning and type of content contained within it to the browser.

Answer: B) False

> The <div> is a non-semantic container. Tags like <article>, <nav>, and <footer> are semantic because they describe their content's purpose.