

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Wrangle the DOM: A 9th Grade Full-Stack Web Architecture Quiz

Analyze script delivery and visual hierarchies across 10 challenging scenarios that bridge static layouts and dynamic user interfaces.

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**1. A developer wants to ensure that a heavy JavaScript file does not block the initial rendering of the HTML document. Which script attribute strategy should be evaluated to allow the browser to continue parsing while the script downloads?**

- A. Inline script injection
- B. The 'defer' attribute
- C. Synchronous loading at the top of the <head>
- D. The 'important' CSS flag

**2. True or False: In the CSS Box Model, the 'padding' property increases the space between the element's border and its surrounding neighbor elements.**

- A. True
- B. False

**3. A responsive designer is using CSS Flexbox. Which property must be applied to the parent container to allow child items to wrap onto multiple lines if they exceed the container's width?**

- A. display: block
- B. flex-direction: column
- C. flex-wrap: wrap
- D. justify-content: center

**4. Evaluate the following scenario: A website's button correctly changes color on hover (CSS), but clicking it fails to trigger a critical data calculation. Which layer of the web stack is likely containing the logic error?**

- A. HTML semantic structure
- B. CSS pseudo-classes
- C. JavaScript Event Listeners
- D. The DNS record

**5. In the context of the Document Object Model (DOM), what method is most efficient for selecting an element with the specific unique identifier <section id='hero-banner'>?**

- A. document.getElementsByTagName('section')
- B. document.querySelector('.hero-banner')
- C. document.getElementById('hero-banner')
- D. document.write('hero-banner')

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**6. True or False: Using semantic HTML tags like <main>, <article>, and <nav> instead of generic <div> tags improves accessibility for screen readers and search engine optimization (SEO).**

- A. True
- B. False

**7. If a CSS rule defines 'color: red' for a class '.text-box' and another rule defines 'color: blue' for an ID '#main-header' on the same element, which color will the text display and why?**

- A. Red, because classes are more specific than IDs
- B. Blue, because IDs have higher specificity
- C. Purple, because the browser blends the two colors
- D. Black, because the conflict causes a syntax error

**8. Which JavaScript keyword is used to declare a variable whose reference cannot be reassigned, providing a safeguard against accidental data mutation?**

- A. var
- B. let
- C. function
- D. const

**9. True or False: CSS Grid is primarily designed for one-dimensional layouts (either a row or a column), whereas Flexbox is best for complex two-dimensional layouts.**

- A. True
- B. False

**10. A user fills out a registration form. Which technology is best suited to check if the 'Password' and 'Confirm Password' fields match instantly, before the data is even sent to a server?**

- A. CSS Media Queries
- B. HTML <table> tags
- C. Client-side JavaScript
- D. HTTP Request Headers