HTML Interview Questions & Answers

Role: IT Company Hiring Manager (HR)
Level: Basic to Semi-Advanced

Semantic Tags

1. **Q1: What are semantic HTML tags?**
   Answer: Semantic HTML tags clearly describe the meaning of the content.
   They help browsers and developers understand page structure.
   Examples include `<header>`, `<footer>`, `<article>`, `<section>`, and `<nav>`.
2. **Q2: Why should we use semantic tags instead of `<div>`?**
   Answer: Semantic tags improve code readability, SEO, and accessibility.
   They help search engines and screen readers understand content structure better.
3. **Q3: Difference between `<section>` and `<article>`?**
   Answer: `<section>` is used to group related content within a page.
   `<article>` is used for independent and reusable content like blog posts or news articles.
4. **Q4: How do semantic tags help accessibility?**
   Answer: Screen readers use semantic tags to understand the page layout.
   This makes navigation easier for visually impaired users.

Attributes

5. **Q5: What is an HTML attribute?**
   Answer: An HTML attribute provides additional information about an element.
   It is written inside the opening tag, such as `src` and `alt` in an image tag.
6. **Q6: What are global attributes?**
   Answer: Global attributes can be used on any HTML element.
   Examples include `class`, `id`, `style`, `title`, and `hidden`.
7. **Q7: Difference between id and class?**
   Answer: An `id` must be unique and used only once on a page.
   A `class` can be reused multiple times on different elements.
8. *Q8: What is the purpose of the data- attribute?**
   Answer: The `data-*` attribute is used to store custom data.
   This data can be accessed and manipulated using JavaScript.

HTML Elements

9. **Q9: What is an HTML element?**
   Answer: An HTML element consists of an opening tag, content, and a closing tag.
   Example: `<p>Hello</p>`.
10. **Q10: Difference between block and inline elements?**
    Answer: Block elements take full width and start on a new line.
    Inline elements take only the required width and do not start a new line.
11. **Q11: What are empty (void) elements?**
    Answer: Empty elements do not have closing tags.
    Examples include `<img>`, `<br>`, `<hr>`, and `<input>`.
12. **Q12: What happens if HTML tags are not closed properly?**
    Answer: Improperly closed tags can cause layout issues and unexpected behavior.
    Browsers may try to auto-correct errors, but results can be unreliable.

Forms and Inputs

13. **Q13: What is the purpose of the `<form>` tag?**
    Answer: The `<form>` tag is used to collect user input.
    It sends the collected data to the server for processing.
14. **Q14: Name some common input types.**
    Answer: Common input types include text, email, password, number, radio, checkbox, and submit.
15. **Q15: Difference between GET and POST?**
    Answer: GET sends data through the URL and is less secure.
    POST sends data in the request body and is more secure.
16. **Q16: Why is the `<label>` tag important?**
    Answer: The `<label>` tag improves accessibility.
    It allows users to click the label to focus on the related input field.

Media

17. **Q17: How do you add an image in HTML?**
    Answer: An image is added using the `<img>` tag.
    The `src` attribute specifies the image path, and `alt` provides alternative text.

18. **Q18: Difference between audio and video tags?**
    Answer: The `<audio>` tag is used for sound files only.
    The `<video>` tag is used for visual media with sound.
19. **Q19: Why is the alt attribute important?**
    Answer: The `alt` attribute improves accessibility and SEO.
    It also displays text if the image fails to load.
20. **Q20: How can you optimize media for better performance?**
    Answer: Media can be optimized by compressing files and using modern formats.
    Lazy loading and avoiding large file sizes also improve performance.

CSS Interview Questions & Answers

Role: IT Company Hiring Manager (HR)
Level: Basic to Semi-Advanced
Total Questions: 15

Selectors

21. **Q1: What is a CSS selector?**
    Answer: A CSS selector is used to select HTML elements that you want to style.
    It tells the browser which elements the CSS rules should apply to.
22. **Q2: Difference between class selector and id selector?**
    Answer: A class selector can be used multiple times on a page.
    An id selector must be unique and should be used only once.
23. **Q3: What is the universal selector and when is it used?**
    Answer: The universal selector (`*`) selects all elements on a page.
    It is commonly used to reset default margin and padding.

Box Model

24. **Q4: What is the CSS box model?**
    Answer: The CSS box model describes the layout structure of an element.
    It includes content, padding, border, and margin.
25. **Q5: Difference between padding and margin?**
    Answer: Padding creates space **inside** an element.
    Margin creates space **outside** an element.

26. **Q6: What does `box-sizing: border-box` do?**
    Answer: It includes padding and border within the element's total width and height.
    This makes layouts easier to manage and more predictable.

Positioning and Layout

27. **Q7: What are the different CSS position values?**
    Answer: Common CSS position values are `static`, `relative`, `absolute`, `fixed`, and `sticky`.
28. **Q8: Difference between relative and absolute positioning?**
    Answer: Relative positioning moves an element based on its normal position.
    Absolute positioning moves an element relative to its nearest positioned parent.
29. **Q9: What is Flexbox and why is it used?**
    Answer: Flexbox is a layout model used to align and distribute space between elements.
    It is especially useful for creating responsive layouts.

Responsive Design

30. **Q10: What is responsive web design?**
    Answer: Responsive web design allows a website to adapt to different screen sizes.
    It ensures usability on mobile, tablet, and desktop devices.
31. **Q11: What are media queries?**
    Answer: Media queries apply CSS styles based on device screen size or resolution.
    They help create responsive designs.
32. **Q12: Why is mobile-first design recommended?**
    Answer: Mobile-first design focuses on smaller screens first.
    It improves performance and user experience before scaling up.

Styling

33. **Q13: How can CSS be added to a webpage?**
    Answer: CSS can be added using inline styles, internal styles, or external style sheets.
    External CSS is the most recommended for maintainability.

34. **Q14: What is specificity in CSS?**
    Answer: Specificity determines which CSS rule is applied when multiple rules target the same element. More specific rules override less specific ones.

35. **Q15: Difference between `display: none` and `visibility: hidden`?**
    Answer: `display: none` removes the element completely from the layout.
    `visibility: hidden` hides the element but keeps its space.

JavaScript Interview Questions & Answers

Role: IT Company Hiring Manager (HR)

DOM Manipulation (5 Questions)

36. **Q1: What is the DOM in JavaScript?**
    A: The DOM (Document Object Model) is a structured representation of an HTML document.
    It allows JavaScript to access, modify, add, or remove elements dynamically on a web page.
37. **Q2: How do you select an element by ID?**
    A: You can select an element by its ID using `document.getElementById()`.
    It returns a single element that can be manipulated using JavaScript.
38. **Q3: Difference between getElementById and querySelector?**
    A: `getElementById` selects elements only by ID and is faster.
    `querySelector` is more flexible and supports all CSS selectors.
39. **Q4: How do you change text content of an element?**
    A: You can update text using the `textContent` property.
    It safely modifies only the text without changing HTML tags.
40. **Q5: How do you add a class to an element?**
    A: You can add a class using `element.classList.add()`.
    This is useful for applying styles or behavior dynamically.

Control Flow (5 Questions)

41. **Q6: What is control flow?**
    A: Control flow defines the order in which JavaScript statements run.
    It helps programs make decisions and repeat operations.

42. **Q7: What is an if-else statement?**
    A: An if-else statement executes code based on a condition.
    If the condition is true, one block runs; otherwise another runs.
43. **Q8: Difference between for loop and while loop?**
    A: A for loop is used when the number of iterations is known.
    A while loop runs as long as a condition remains true.
44. **Q9: What is a switch statement?**
    A: A switch statement executes different blocks based on matching values.
    It improves readability when handling multiple conditions.
45. **Q10: What does break do in a loop?**
    A: The `break` statement stops the loop immediately.
    It is often used when a required condition is met early.

ES6 Features (8 Questions)

46. **Q11: What is ES6?**
    A: ES6 is a major update to JavaScript that introduced modern features.
    It helps developers write cleaner and more efficient code.
47. **Q12: Difference between var, let, and const?**
    A: `var` is function-scoped and can be redeclared.
    `let` and `const` are block-scoped, and `const` cannot be reassigned.
48. **Q13: What are arrow functions?**
    A: Arrow functions provide a shorter function syntax.
    They also do not have their own `this` context.
49. **Q14: What are template literals?**
    A: Template literals allow embedding expressions inside strings.
    They use backticks and improve readability.
50. **Q15: What is destructuring?**
    A: Destructuring extracts values from arrays or objects into variables.
    It reduces repetitive code and improves clarity.
51. **Q16: What is the spread operator?**
    A: The spread operator (`...`) expands elements of arrays or objects.
    It is commonly used for copying or merging data.
52. **Q17: What are default parameters?**
    A: Default parameters provide default values for function arguments.
    They are used when no argument is passed.
53. **Q18: What are ES6 modules?**
    A: ES6 modules allow code to be organized into reusable files.
    They use `export` and `import` keywords.

APIs (7 Questions)

54. **Q19: What is an API?**
    A: An API allows different applications to communicate.
    It defines how data is requested and shared.
55. **Q20: What is a REST API?**
    A: A REST API follows REST principles and uses HTTP methods.
    It is widely used for web services.
56. **Q21: What is JSON?**
    A: JSON is a lightweight data exchange format.
    It is easy to read, write, and parse.
57. **Q22: What is the Fetch API?**
    A: The Fetch API is used to make HTTP requests.
    It works with promises for handling responses.
58. **Q23: Difference between GET and POST?**
    A: GET retrieves data and sends it via URL.
    POST sends data securely in the request body.
59. **Q24: What is async/await?**
    A: async/await makes asynchronous code easier to read.
    It helps avoid complex promise chains.
60. **Q25: What is an HTTP status code?**
    A: HTTP status codes represent request results.
    Examples include 200 for success and 404 for not found.