

1. What is Semantic HTML?

Semantic HTML uses HTML5 tags that clearly describe the meaning of the content inside them, making the structure of the webpage more readable and accessible.

Examples:

- <header>: Represents the top section of a page.
- <nav>: For navigation links.
- <article>: For independent, self-contained content.
- <footer>: For the bottom section of a page.

2. How does CSS Flexbox differ from Grid?

Flexbox is one-dimensional (row OR column), best for aligning items in a single line.

Grid is two-dimensional (row AND column), suitable for complex layouts.

Use Case:

- Flexbox: Centering, navigation bars.
- Grid: Full web page layouts.

3. What are Media Queries?

Media queries are CSS techniques used to apply styles based on screen size, resolution, or device type.

Example:

```
@media (max-width: 600px) {  
  
  body {  
  
    background-color: lightblue;  
  
  }  
  
}
```

4. How do you make a website responsive?

- Use relative units like %, em, or rem
- Use media queries for different screen sizes

- Use flexbox or grid
- Set images/videos to max-width: 100%
- Avoid fixed widths

5. Explain the Box Model.

Every HTML element is a box made of:

- Content: The actual text or image.
- Padding: Space inside the box, around content.
- Border: Surrounds the padding.
- Margin: Space outside the border.

6. What is the difference between classes and IDs in CSS?

Class (.) can be reused, ID (#) should be unique.

Syntax:

- .classname
- #idname

Specificity: ID > Class

7. How can you optimize CSS for performance?

- Minify CSS files
- Combine multiple CSS files
- Use shorthand properties
- Remove unused CSS
- Avoid deep selectors
- Load critical CSS first

8. What is the difference between relative and absolute positioning?

- Relative: Positions an element from its normal spot.

Example: top: 10px moves it 10px down.

- Absolute: Positions an element relative to the nearest positioned ancestor.

Example: top: 0; left: 0;

9. How does the z-index property work?

z-index controls the stacking order of elements.

- Higher z-index = appears on top
- Only works on positioned elements (relative, absolute, fixed, sticky).

10. What is the difference between padding and margin?

- Padding: Inside the element, affects background
- Margin: Outside the element, transparent space between elements