

Short Answer Questions

1. What are self-closing elements in HTML? Give some examples

 <hr> <input> <link>

2. What is block element? How is it different from inline, and inline-block elements?

Block element takes up the full screen width. Inline element only takes up the space its content needs. Inline block does not take up a new line. Block element can set width, height, padding and margin. Inline element cannot set width and height, top and bottom margin cannot be set. Inline-block can set width, height, margin and padding.

Block element: <div> <p> <h1><section>

Inline element: <a>

Inline-block: <button>

3. What is the difference between pseudo-class and pseudo-element?

Pseudo-class target an element in a specific state. Pseudo-element target a specific part of an element.

Pseudo-class: a:hover { }

Pseudo-element: p::first-letter { }

4. What is the Box Model? Describe each part.

Box model = content + padding + border + margin

5. How do you center a block element with CSS?

```
.parent {  
    display: flex;  
    justify-content: center;  
    align-items: center;  
}
```

6. What is a flex container? Can you explain some flex container properties?

A flex container is an element with display: flex

Flex-direction, justify-content, align-items, flex-wrap, order

7. What is responsive web design? How do we achieve this?

Responsive web design allow the web page to adapt to different screen sizes and device. We can use media query to set breakpoint, use fluid layout, use flexbox and grid.

8. What are primitive data types & reference data types in JS?

Primitive data type store a single value. Eg. Number, string, boolean, undefined, NULL, they are immutable.

Reference data type store the reference to the memory location where is data is stored. They are mutable.

9. How do you sort an array of numbers in ascending and descending order?

`arr.sort((a, b) => a - b)`

`arr.sort((a, b) => b - a)`

10. What's Short-circuiting?

When a program get a value that can represent the final result of the logical operation, it stop evaluating.

11. What is hoisting?

Hoisting is move the declaration to the top of the scope.

12. What are scopes in JS? What is the difference between var, let and const?

The domain where the variable can be accessed.

Var can be redeclared and re-assigned

Let can mot be redeclared but can be re-assigned

Const cannot be redeclared and cannot be re-assigned

13. Explain Template Literal

Template literal help generate different value of a string based on different properties, delimited by `xxx\${value}xxx`

Coding

1. Implement the following table. (Hint: colspan & rowspan)

Table

Header 1	Header 2 and 3	
Row 1 and 2, Cell 1	Row 1, Cell 2	Row 1, Cell 3
	Row 2, Cell 2 and 3	
Row 3, Cell 1	Row 3, Cell 2	Row 3, Cell 3

2. Task: Using the same HTML, write CSS to achieve three different centering

effects:

```
<div class="container">  
    <div class="box">Center</div>  
</div>
```

- a.Horizontal centering: center the box horizontally in the container.
- b.Vertical centering: center the box vertically in the container.
- c.Horizontal + Vertical centering: center the box both horizontally and vertically in the container

3. Use slice to copy part of an array:

```
const arr1 = [10, 20, 30, 40];  
//write your code here  
expected output: [20, 30]
```

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