# Randomly Selected Questions - Set 8

**Question 1 (ID: 3.9.4):** Multiple Choice: What does the following code output?  
  
javascript  
Copy code  
let book = {  
 title: "Outliers",  
 published: 2011,  
 author: { firstName: "Malcolm", lastName: "Gladwell" }  
};  
console.log(book.author.lastName);  
(A) Malcolm  
(B) Gladwell  
(C) Outliers  
(D) undefined

**Question 2 (ID: 4.2.3):** Multi-Select: Which of the following characters are considered special characters in regular expressions? (Select all that apply)  
  
- (A) `\*`  
- (B) `+`  
- (C) `/`  
- (D) `$`

**Question 3 (ID: 3.1.6):** Multiple Choice: Which function is used to display output in a browser's console?  
 - (A) alert()  
 - (B) write()  
 - (C) console.log()  
 - (D) print()

**Question 4 (ID: 3.2.2):** Multiple Choice: What is the result of the following expression in JavaScript?  
let x = 5 % 2;  
- (A) 0  
- (B) 1  
- (C) 2  
- (D) 5

**Question 5 (ID: 1.6.4):** Multiple Choice: What is the correct HTML element for creating a list item?  
 - (A) <item>  
 - (B) <li>  
 - (C) <listitem>  
 - (D) <ul>

**Question 6 (ID: 4.5.3):** Multiple Choice: What is the effect of adding `box-sizing: border-box` to input fields?  
  
- (A) It includes padding and borders in the element's width and height.  
- (B) It excludes padding and borders from the element's width and height.  
- (C) It adds extra spacing around the element.  
- (D) It removes any styling from the input fields.

**Question 7 (ID: 2.5.3):** Multi-Select: Which layers are considered when calculating the total size of an element in the CSS box model? (Select all that apply)  
 - (A) Content  
 - (B) Padding  
 - (C) Border  
 - (D) Margin

**Question 8 (ID: 3.11.9):** Multiple Choice: What is the purpose of the `trim()` method in JavaScript?  
  
- (A) Trims off a substring from the start and end of the string.  
- (B) Removes whitespace from both ends of a string.  
- (C) Converts a string to lowercase.  
- (D) Replaces spaces with underscores.

**Question 9 (ID: 4.11.9):** Multiple Choice: What is the role of regular expressions in validating form input?  
  
(A) To match the input against specific patterns such as phone numbers or ZIP codes.  
(B) To automatically correct input errors.  
(C) To prevent the form from being submitted.  
(D) To highlight invalid fields in the form.

**Question 10 (ID: 4.9.3):** Multi-Select: Which of the following are common events in JavaScript? (Select all that apply)  
  
- (A) click  
- (B) keydown  
- (C) submit  
- (D) colorchange

**Question 11 (ID: 3.10.1):** Multiple Choice: What does the following code output?  
  
let stateCapitals = {  
 AR: "Little Rock",  
 CO: "Denver",  
 NM: "Santa Fe"  
};  
console.log(stateCapitals["CO"]);  
  
- (A) Little Rock  
- (B) Denver  
- (C) Santa Fe  
- (D) undefined

**Question 12 (ID: 2.5.9):** Multiple Choice: What is the default box-sizing property value in CSS?  
 - (A) border-box  
 - (B) padding-box  
 - (C) content-box  
 - (D) margin-box

**Question 13 (ID: 4.2.9):** Multiple Choice: What does the `exec()` method return when there is no match in JavaScript?  
  
- (A) undefined  
- (B) false  
- (C) null  
- (D) an empty string

**Question 14 (ID: 2.6.6):** Multiple Choice: Which of the following CSS properties is typically used to set the stacking order of elements with positioning?  
 - (A) z-index  
 - (B) float  
 - (C) visibility  
 - (D) opacity

**Question 15 (ID: 4.5.9):** Multiple Choice: What is the purpose of setting `:hover` on a submit button?  
  
- (A) It ensures the button changes color when hovered over.  
- (B) It disables the button when hovered.  
- (C) It changes the text color of the button.  
- (D) It resizes the button when clicked.

**Question 16 (ID: 3.5.4):** Multiple Choice: What happens if the condition in a `for` loop is initially false?  
  
- (A) The loop runs infinitely.  
- (B) The loop will execute once.  
- (C) The loop body will never execute.  
- (D) The condition will be ignored.

**Question 17 (ID: 4.10.2):** Multiple Choice: What happens when you use the `setProperty()` method in JavaScript?  
  
- (A) It changes the value of an element's CSS property.  
- (B) It removes an element's CSS property.  
- (C) It adds a new CSS property to the element.  
- (D) It replaces the element with a new one.

**Question 18 (ID: 4.9.6):** Multiple Choice: What is the purpose of the `blur` event in JavaScript?  
  
- (A) It triggers when an element loses focus.  
- (B) It triggers when an element is clicked.  
- (C) It triggers when an element is hovered over.  
- (D) It cancels all ongoing events.

**Question 19 (ID: 4.4.7):** Multiple Choice: What happens if no radio button in a group is selected when the form is submitted?  
  
- (A) The browser sends a null value.  
- (B) The browser sends an empty string.  
- (C) The browser does not send the name or value of the radio button group.  
- (D) The browser sends the first radio button's value by default.

**Question 20 (ID: 4.2.7):** Multi-Select: Which of the following are valid uses of square brackets `[]` in regular expressions? (Select all that apply)  
  
- (A) To specify a range of characters to match.  
- (B) To negate a set of characters.  
- (C) To group parts of a regular expression together.  
- (D) To match exactly one of the characters in the set.

**Question 21 (ID: 4.9.9):** Multiple Choice: Which phase comes first in the DOM event model?  
  
- (A) Bubbling phase  
- (B) Capturing phase  
- (C) At target phase  
- (D) Callback phase

**Question 22 (ID: 4.10.5):** Multiple Choice: What does the `removeProperty()` method do in JavaScript?  
  
- (A) It removes a CSS property from an element's inline style.  
- (B) It removes the entire element from the DOM.  
- (C) It deletes the parent element of the node.  
- (D) It replaces the existing CSS property with a new one.

**Question 23 (ID: 3.7.8):** Multiple Choice: What happens when you declare a variable without var, let, or const inside a function?  
  
(A) It becomes a local variable.  
(B) It becomes a block-scoped variable.  
(C) It becomes a global variable.  
(D) It throws an error.

**Question 24 (ID: 1.4.4):** Multiple Choice: Which of the following is a proper use of HTML comments?  
 - (A) To execute a JavaScript function conditionally  
 - (B) To leave notes for other developers within the code  
 - (C) To create a hidden text field in a form  
 - (D) To style elements differently based on the comment

**Question 25 (ID: 3.1.9):** Multi-Select: Which of the following are common ways to obtain user input in JavaScript? (Select all that apply)  
- (A) console.log()  
- (B) prompt()  
- (C) alert()  
- (D) input()

**Question 26 (ID: 3.3.7):** Multiple Choice: What is the result of the following code?  
let score = 2;   
if (score === "2") {   
 score = 10; } console.log(score);  
- (A) 2  
- (B) 10  
- (C) "2"  
- (D) Error

**Question 27 (ID: 1.5.3):** Multiple Choice: Which attribute specifies the image source in an <img> tag?  
 - (A) href  
 - (B) src  
 - (C) rel  
 - (D) type

**Question 28 (ID: 1.8.10):** Multiple Choice: What type of HTML element is `<header>`, and what is its typical use?  
 - (A) Inline; used for short text links  
 - (B) Block; used for introductory content or navigational links  
 - (C) Inline; used to group navigation links  
 - (D) Block; used only for bottom page content

**Question 29 (ID: 1.3.7):** True/False: The <br> tag requires a closing tag.

**Question 30 (ID: 4.8.8):** Multiple Choice: What is the difference between `childNodes` and `children` properties?  
  
- (A) `childNodes` includes text nodes, while `children` includes only element nodes.  
- (B) `children` includes all node types, while `childNodes` includes only element nodes.  
- (C) `childNodes` includes only the first child, while `children` includes all children.  
- (D) `children` includes only the first child, while `childNodes` includes all children.

**Question 31 (ID: 3.7.4):** Multiple Choice: What happens when you try to access a `let` variable before it has been declared?  
  
- (A) The variable is undefined.  
- (B) The variable is set to `null`.  
- (C) A ReferenceError is thrown.  
- (D) It automatically assigns a default value.

**Question 32 (ID: 4.11.3):** Multi-Select: Which of the following are common methods for performing form validation using JavaScript? (Select all that apply)  
  
- (A) Validating data while the user is typing  
- (B) Validating data immediately after the form is submitted  
- (C) Using regular expressions to validate patterns like ZIP codes  
- (D) Using server-side validation only

**Question 33 (ID: 2.7.3):** Multiple Choice: What is the default value of the `flex-direction` property in CSS?  
 - (A) `column`  
 - (B) `row`  
 - (C) `column-reverse`  
 - (D) `row-reverse`

**Question 34 (ID: 1.10.3):** True/False: The `value` attribute of an input element is visible to the user and can be modified.

# Answers

**Answer to Question 1:** (B) Gladwell

**Answer to Question 2:** (A) `\*`, (B) `+`, (D) `$`

**Answer to Question 3:** (C) console.log()

**Answer to Question 4:** (B) 1

**Answer to Question 5:** (B) <li>

**Answer to Question 6:** (A) It includes padding and borders in the element's width and height.

**Answer to Question 7:** (A) Content, (B) Padding, (C) Border

**Answer to Question 8:** (B) Removes whitespace from both ends of a string.

**Answer to Question 9:** (A) To match the input against specific patterns such as phone numbers or ZIP codes.

**Answer to Question 10:** (A) click, (B) keydown, (C) submit

**Answer to Question 11:** (B) Denver

**Answer to Question 12:** (C) content-box

**Answer to Question 13:** (C) null

**Answer to Question 14:** (A) z-index

**Answer to Question 15:** (A) It ensures the button changes color when hovered over.

**Answer to Question 16:** (C) The loop body will never execute.

**Answer to Question 17:** (A) It changes the value of an element's CSS property.

**Answer to Question 18:** (A) It triggers when an element loses focus.

**Answer to Question 19:** (C) The browser does not send the name or value of the radio button group.

**Answer to Question 20:** (A) To specify a range of characters to match., (B) To negate a set of characters., (D) To match exactly one of the characters in the set.

**Answer to Question 21:** (B) Capturing phase

**Answer to Question 22:** (A) It removes a CSS property from an element's inline style.

**Answer to Question 23:** (C) It becomes a global variable.

**Answer to Question 24:** (B) To leave notes for other developers within the code

**Answer to Question 25:** (B) prompt(), (C) alert()

**Answer to Question 26:** (A) 2

**Answer to Question 27:** (B) src

**Answer to Question 28:** (B) Block; used for introductory content or navigational links

**Answer to Question 29:** False

**Answer to Question 30:** (A) `childNodes` includes text nodes, while `children` includes only element nodes.

**Answer to Question 31:** (C) A ReferenceError is thrown.

**Answer to Question 32:** (A) Validating data while the user is typing, (B) Validating data immediately after the form is submitted, (C) Using regular expressions to validate patterns like ZIP codes

**Answer to Question 33:** (B) `row`

**Answer to Question 34:** True