# Randomly Selected Questions - Set 8

**Question 1 (ID: 4.1.9):** Multiple Choice: What does the `setFullYear()` method do in JavaScript?  
  
- (A) Sets the year for the `Date` object to a 2-digit year.  
- (B) Sets the year for the `Date` object to a 4-digit year.  
- (C) Sets the year, month, and date for the `Date` object.  
- (D) It doesn't exist in JavaScript.

**Question 2 (ID: 4.6.5):** Multiple Choice: What will be the output of this JavaScript code?  
  
<div id="myDiv">Hello</div>  
<script>  
document.getElementById("myDiv").innerHTML = "Goodbye";  
</script>  
  
- (A) "Hello" will be replaced with "Goodbye"  
- (B) "Hello" will remain unchanged  
- (C) The div will be removed from the DOM  
- (D) The code will cause an error

**Question 3 (ID: 4.2.6):** Multiple Choice: What does the regex `/ab\*c/` match?  
  
- (A) "ac"  
- (B) "abc"  
- (C) "abbbbbbc"  
- (D) All of the above

**Question 4 (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 5 (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 6 (ID: 3.11.3):** Multi-Select: Which of the following methods can be used to extract a substring from a string? (Select all that apply)  
  
- (A) `substring()`  
- (B) `substr()`  
- (C) `slice()`  
- (D) `charAt()`

**Question 7 (ID: 3.11.8):** Multiple Choice: What will the following code output?  
  
let phrase = "Spaces here";  
console.log(phrase.length);  
  
- (A) 10  
- (B) 11  
- (C) 12  
- (D) undefined

**Question 8 (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 9 (ID: 2.3.3):** Multi-Select: Which properties can use the `rgba()` function for defining colors? (Select all that apply)  
 - (A) color  
 - (B) background-color  
 - (C) border-color  
 - (D) outline-color

**Question 10 (ID: 4.7.6):** Multiple Choice: What happens when you modify the `textContent` property of a DOM element?  
  
- (A) It replaces the element with a new element.  
- (B) It updates the text inside the element.  
- (C) It changes the element's CSS styling.  
- (D) It removes the element from the DOM.

**Question 11 (ID: 1.9.2):** Multiple Choice: Which HTML element defines a single cell in a table header?  
 - (A) `<td>`  
 - (B) `<tr>`  
 - (C) `<th>`  
 - (D) `<caption>`

**Question 12 (ID: 3.7.7):** Multi-Select: Which of the following are characteristics of global variables in JavaScript? (Select all that apply)  
  
(A) Accessible throughout the entire program  
(B) Can be declared inside a function with let  
(C) Can be declared without var, let, or const  
(D) Are properties of the global object in a browser environment

**Question 13 (ID: 3.1.5):** Multiple Choice: What happens when a variable is declared with `const` in JavaScript?  
 - (A) The variable's value can change  
 - (B) The variable's value cannot be reassigned  
 - (C) The variable is block-scoped and can be modified  
 - (D) The variable becomes global by default

**Question 14 (ID: 4.1.8):** Multiple Choice: What happens if you pass only the year to the `Date` constructor?  
  
- (A) It creates a date on January 1st of that year.  
- (B) It creates a date on December 31st of that year.  
- (C) It throws an error.  
- (D) It defaults to the current date.

**Question 15 (ID: 4.7.4):** Multiple Choice: What is the purpose of the `document.createElement()` method in the DOM?  
  
- (A) To create a new text node  
- (B) To remove an existing element  
- (C) To create a new element node  
- (D) To modify an existing element's content

**Question 16 (ID: 3.10.7):** Multi-Select: Which of the following statements are true about for-in loops in JavaScript? (Select all that apply)  
  
- (A) They loop over all enumerable properties of an object.  
- (B) They loop over both the keys and values of an object.  
- (C) They can be used to iterate over arrays.  
- (D) They loop through an object’s keys in insertion order.

**Question 17 (ID: 3.1.1):** Multiple Choice: Who created JavaScript and in what year?  
 - (A) Tim Berners-Lee, 1991  
 - (B) Brendan Eich, 1995  
 - (C) Mark Zuckerberg, 1997  
 - (D) James Gosling, 1995

**Question 18 (ID: 4.9.1):** Multiple Choice: What is an event in JavaScript?  
  
- (A) A user action or occurrence detected by the browser  
- (B) A method to style HTML elements  
- (C) A type of variable in JavaScript  
- (D) A function that loads the page

**Question 19 (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 20 (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 21 (ID: 4.9.2):** Multiple Choice: What is event-driven programming?  
  
- (A) Programming that responds only to events triggered by the user  
- (B) A programming style where code runs in response to events  
- (C) A method to organize JavaScript files  
- (D) A way to trigger events automatically without user interaction

**Question 22 (ID: 1.7.6):** True/False: An `<a>` element can only contain text and cannot include images.

**Question 23 (ID: 4.7.2):** Multiple Choice: Which of the following is created when an HTML attribute is added to an element?  
  
- (A) A text node  
- (B) A comment node  
- (C) An attribute node  
- (D) An element node

**Question 24 (ID: 2.3.8):** Multiple Choice: Which CSS property combines the definitions of `background-color`, `background-image`, `background-position`, and `background-repeat`?  
 - (A) background-combine  
 - (B) background  
 - (C) background-set  
 - (D) background-all

**Question 25 (ID: 2.7.9):** Multiple Choice: What is the purpose of `flex-basis` in CSS?  
 - (A) To specify the maximum size of a flex item  
 - (B) To specify the initial size of a flex item before any space distribution  
 - (C) To shrink items based on container size  
 - (D) To control the flex direction of the container

**Question 26 (ID: 3.3.3):** Multi-Select: Which of the following are valid comparison operators in JavaScript? (Select all that apply)  
- (A) `===`  
- (B) `!=`  
- (C) `><`  
- (D) `<=`

**Question 27 (ID: 1.2.10):** Multiple Choice: Which tag is specifically designed to programmatically access the content?  
 - (A) <script>  
 - (B) <output>  
 - (C) <template>  
 - (D) <object>

**Question 28 (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 29 (ID: 2.1.9):** Multi-Select: What are the effects of using the '!important' declaration in a CSS rule? (Select all that apply)  
 - (A) It increases the priority of the CSS rule.  
 - (B) It makes the CSS file larger.  
 - (C) It overrides other declarations even if they have higher specificity.  
 - (D) It can make debugging and maintenance of CSS more difficult.

**Question 30 (ID: 1.1.9):** True/False: Every device connected to the Internet must have a unique IP address in the IPv4 or IPv6 standard.

**Question 31 (ID: 4.9.4):** Multiple Choice: What does the `addEventListener()` method do?  
  
- (A) It triggers an event immediately after a function call.  
- (B) It registers an event handler to respond to a specific event.  
- (C) It removes an event from the DOM.  
- (D) It adds an event to the CSS styling.

**Question 32 (ID: 3.4.10):** Multi-Select: Which of the following are valid switch statement structures? (Select all that apply)  
- (A) `switch (fruit) { case "apple": eat(); break; case "orange": peel(); break; }`  
- (B) `switch (num) { case 1: one(); case 2: two(); break; }`  
- (C) `switch (day) { case "Monday": rest(); break; default: work(); }`  
- (D) `switch (value) { case true: accept(); default: decline(); }`

**Question 33 (ID: 2.6.2):** Multiple Choice: When using `position: absolute;`, what happens if no ancestor elements have a position other than `static`?  
 - (A) The element is positioned relative to the viewport  
 - (B) The element is positioned relative to its parent element  
 - (C) The element does not appear on the page  
 - (D) The element is positioned relative to the document's root element

**Question 34 (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.

# Answers

**Answer to Question 1:** (B) Sets the year for the `Date` object to a 4-digit year.

**Answer to Question 2:** (A) "Hello" will be replaced with "Goodbye"

**Answer to Question 3:** (D) All of the above

**Answer to Question 4:** (B) Removes whitespace from both ends of a string.

**Answer to Question 5:** (A) `\*`, (B) `+`, (D) `$`

**Answer to Question 6:** (A) `substring()`, (B) `substr()`, (C) `slice()`

**Answer to Question 7:** (B) 11

**Answer to Question 8:** (A) To match the input against specific patterns such as phone numbers or ZIP codes.

**Answer to Question 9:** (A) color, (B) background-color, (C) border-color, (D) outline-color

**Answer to Question 10:** (B) It updates the text inside the element.

**Answer to Question 11:** (C) `<th>`

**Answer to Question 12:** (A) Accessible throughout the entire program, (C) Can be declared without `var`, `let`, or `const`, (D) Are properties of the global object in a browser environment.

**Answer to Question 13:** (B) The variable's value cannot be reassigned

**Answer to Question 14:** (A) It creates a date on January 1st of that year.

**Answer to Question 15:** (C) To create a new element node

**Answer to Question 16:** (A) They loop over all enumerable properties of an object., (C) They can be used to iterate over arrays.

**Answer to Question 17:** (B) Brendan Eich, 1995

**Answer to Question 18:** (A) A user action or occurrence detected by the browser

**Answer to Question 19:** (C) A ReferenceError is thrown.

**Answer to Question 20:** (B) <li>

**Answer to Question 21:** (B) A programming style where code runs in response to events

**Answer to Question 22:** False

**Answer to Question 23:** (C) An attribute node

**Answer to Question 24:** (B) background

**Answer to Question 25:** (B) To specify the initial size of a flex item before any space distribution

**Answer to Question 26:** (A) `===`, (B) `!=`, (D) `<=`

**Answer to Question 27:** (A) <script>

**Answer to Question 28:** (B) To leave notes for other developers within the code

**Answer to Question 29:** (A) It increases the priority of the CSS rule, (C) It overrides other declarations even if they have higher specificity, (D) It can make debugging and maintenance of CSS more difficult.

**Answer to Question 30:** True

**Answer to Question 31:** (B) It registers an event handler to respond to a specific event.

**Answer to Question 32:** (A), (C)

**Answer to Question 33:** (A) The element is positioned relative to the viewport

**Answer to Question 34:** (A) It includes padding and borders in the element's width and height.