# Randomly Selected Questions - Set 5

**Question 1 (ID: 3.5.1):** Multiple Choice: What is the key difference between a `while` loop and a `do-while` loop in JavaScript?  
  
- (A) The `while` loop always runs at least once, while the `do-while` loop might not run at all.  
- (B) The `do-while` loop checks the condition before running the loop body.  
- (C) The `while` loop checks the condition before running the loop body, while the `do-while` loop checks the condition after.  
- (D) There is no difference between `while` and `do-while`.

**Question 2 (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 3 (ID: 2.3.6):** Multiple Choice: What is the result of using the `float` property with a value of `left` on an image within a paragraph?  
 - (A) The image is removed from the flow of the document  
 - (B) The image floats to the left, and text wraps around it on the right  
 - (C) The image stays fixed at the left edge of its container  
 - (D) The image aligns to the left, but text does not wrap around it

**Question 4 (ID: 3.11.6):** Multiple Choice: What is the result of this code?  
  
let text = "Hello World!";  
let newText = text.replace("World", "JavaScript");  
console.log(newText);  
  
- (A) Hello World!  
- (B) Hello JavaScript!  
- (C) Hello Java!  
- (D) Error

**Question 5 (ID: 4.2.2):** Multiple Choice: What is the output of the following code?  
  
let re = /ab/;  
let words = ["ban", "babble", "make", "flab"];  
words.forEach(function(word) {  
 if (re.test(word)) {  
 console.log(word + " matches!");  
 }  
});  
  
- (A) ban matches!, babble matches!  
- (B) babble matches!, flab matches!  
- (C) make matches!  
- (D) No output

**Question 6 (ID: 3.2.7):** Multi-Select: Which of the following are valid compound assignment operators in JavaScript? (Select all that apply)  
- (A) `+=`  
- (B) `-=`  
- (C) `\*\*=`  
- (D) `//=`

**Question 7 (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 8 (ID: 4.3.1):** Multiple Choice: What is the purpose of the `action` attribute in a `<form>` element?  
  
- (A) It specifies the URL where the form data should be sent.  
- (B) It specifies the method of submitting the form (GET or POST).  
- (C) It validates the form input before submission.  
- (D) It styles the form element.

**Question 9 (ID: 1.2.9):** True/False: Inline styles added directly to HTML elements using the 'style' attribute are discouraged in modern web development practices.

**Question 10 (ID: 3.9.2):** Multiple Choice: Which of the following is a valid way to add a new property to an existing object?  
  
(A) book.author = "Malcolm Gladwell";  
(B) book.addProperty("author", "Malcolm Gladwell");  
(C) book["author"] = "Malcolm Gladwell";  
(D) Both (A) and (C)

**Question 11 (ID: 3.10.3):** Multi-Select: Which of the following are valid ways to loop through an object’s properties? (Select all that apply)  
  
- (A) for (let key in object)  
- (B) for (let key of object)  
- (C) Object.keys(object).forEach()  
- (D) for (let value of Object.values(object))

**Question 12 (ID: 1.9.4):** Multiple Choice: What attribute of the `<td>` element makes it span multiple columns?  
 - (A) `expand`  
 - (B) `colspan`  
 - (C) `stretch`  
 - (D) `widthspan`

**Question 13 (ID: 2.1.8):** Multiple Choice: Which selector would target all <p> elements inside <div> elements?  
 - (A) div p  
 - (B) div + p  
 - (C) div > p  
 - (D) p div

**Question 14 (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 15 (ID: 2.4.9):** Multiple Choice: What unit is best used for defining font sizes that scale with device settings?  
 - (A) pixels (px)  
 - (B) points (pt)  
 - (C) viewport width (vw)  
 - (D) root em (rem)

**Question 16 (ID: 1.7.2):** Multiple Choice: What attribute of the `<a>` tag specifies the URL the link goes to?  
 - (A) src  
 - (B) href  
 - (C) rel  
 - (D) type

**Question 17 (ID: 2.4.1):** Multiple Choice: What does the `font-family` property specify in CSS?  
 - (A) The line height of text  
 - (B) The decoration of the text  
 - (C) The font type used for text rendering  
 - (D) The color of the text

**Question 18 (ID: 4.5.7):** Multiple Choice: What is the effect of adding `background-color: lightblue;` to an input's `:focus` state?  
  
- (A) The input field turns blue when clicked.  
- (B) The input field turns light blue when it gains focus.  
- (C) The input field loses focus after being clicked.  
- (D) The input text changes to light blue.

**Question 19 (ID: 2.2.2):** Multiple Choice: What does an ID selector begin with in CSS?  
 - (A) A hash (#)  
 - (B) A dot (.)  
 - (C) An at sign (@)  
 - (D) A dollar sign ($)

**Question 20 (ID: 3.8.7):** Multiple Choice: What will be the output of the following code?  
  
javascript  
Copy code  
let nums = [5, 2, 9, 3];  
nums[0] = nums[1] + nums[2];  
console.log(nums[0]);  
(A) 7  
(B) 5  
(C) 11  
(D) undefined

**Question 21 (ID: 4.6.10):** Multiple Choice: How can you check if a webpage is using HTTPS or HTTP using JavaScript?  
  
- (A) window.protocol  
- (B) window.location.protocol  
- (C) document.protocol  
- (D) window.getProtocol()

**Question 22 (ID: 1.8.8):** Multiple Choice: Which element is most suitable for marking up a sidebar with secondary content like links or advertisements?  
 - (A) `<main>`  
 - (B) `<footer>`  
 - (C) `<aside>`  
 - (D) `<nav>`

**Question 23 (ID: 4.6.4):** Multi-Select: Which of the following are common methods used to interact with the DOM in JavaScript? (Select all that apply)  
  
- (A) document.getElementById()  
- (B) document.createElement()  
- (C) document.addEventListener()  
- (D) document.removeAttribute()

**Question 24 (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 25 (ID: 4.3.10):** Multiple Choice: What does the `placeholder` attribute do in an `<input>` element?  
  
- (A) It provides a hint to the user as to what value should be entered.  
- (B) It pre-populates the input field with a default value.  
- (C) It hides the input field until the form is submitted.  
- (D) It validates the input data before submission.

**Question 26 (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 27 (ID: 4.6.2):** Multiple Choice: Which of the following methods is used to select an HTML element by its `id`?  
  
- (A) document.querySelector()  
- (B) document.getElementById()  
- (C) document.getElementsByClassName()  
- (D) document.selectById()

**Question 28 (ID: 1.3.8):** Multiple Choice: What is the effect of multiple whitespace characters between words in HTML?  
 - (A) They add multiple spaces in the rendered document.  
 - (B) They are collapsed into a single space.  
 - (C) They create a new paragraph.  
 - (D) They are ignored by web browsers.

**Question 29 (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 30 (ID: 3.6.8):** Multiple Choice: Which statement correctly defines an arrow function that calculates the sum of two numbers?  
  
- (A) let sum = (a, b) => { return a + b; }  
- (B) let sum = a, b => return a + b;  
- (C) let sum(a, b) = a + b;  
- (D) arrow sum(a, b) => a + b;

**Question 31 (ID: 3.11.10):** Multiple Choice: What is the benefit of using template literals in JavaScript?  
  
- (A) They allow embedding expressions into strings.  
- (B) They prevent the use of variables in strings.  
- (C) They convert strings to numbers automatically.  
- (D) They remove special characters from strings.

**Question 32 (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 33 (ID: 3.7.5):** Multiple Choice: What will be the output of the following code?  
  
```javascript  
function testVar() {  
 if (true) {  
 var x = 10;  
 }  
 console.log(x);  
}  
testVar();  
(A) 10  
(B) undefined  
(C) ReferenceError  
(D) null

**Question 34 (ID: 1.3.3):** True/False: Nested <p> tags are valid in HTML and do not cause any errors in document rendering.

**Question 35 (ID: 3.4.2):** Multiple Choice: What is the output of the following code?  
let x = 10; console.log(x ? "Truthy" : "Falsy");  
- (A) "Truthy"  
- (B) "Falsy"  
- (C) undefined  
- (D) NaN

**Question 36 (ID: 3.7.6):** Multiple Choice: What will be the output of the following code?  
  
javascript  
Copy code  
function testLet() {  
 if (true) {  
 let x = 10;  
 }  
 console.log(x);  
}  
testLet();  
(A) 10  
(B) undefined  
(C) ReferenceError  
(D) null

**Question 37 (ID: 1.4.6):** Multiple Choice: How should HTML comments be used in a document?  
 - (A) To improve the page's SEO by including keywords  
 - (B) To temporarily disable code without deleting it  
 - (C) To create secure sections of code that cannot be viewed by the user  
 - (D) To automatically update content on a webpage

**Question 38 (ID: 4.4.10):** Multiple Choice: What is the default value sent to the server if a checkbox is selected and no `value` attribute is specified?  
  
- (A) "true"  
- (B) "on"  
- (C) "checked"  
- (D) An empty string

**Question 39 (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 40 (ID: 4.8.10):** Multiple Choice: What does the `previousElementSibling` property return in the DOM?  
  
- (A) The previous sibling node of any type  
- (B) The previous element node that shares the same parent  
- (C) The last sibling of the parent node  
- (D) The first sibling of the parent node

**Question 41 (ID: 4.4.6):** Multiple Choice: What is sent to the server when a radio button is selected?  
  
- (A) The name and value of the selected radio button.  
- (B) Only the name of the selected radio button.  
- (C) The name of the form element.  
- (D) A boolean value.

**Question 42 (ID: 4.1.4):** Multi-Select: Which of the following are valid `Date` object constructors in JavaScript? (Select all that apply)  
  
- (A) `new Date()`  
- (B) `new Date("2024-01-01")`  
- (C) `new Date(2024, 0, 1)`  
- (D) `new Date(1000)`

**Question 43 (ID: 1.1.5):** True/False: The hostname in a URL must always include "www."

**Question 44 (ID: 3.10.2):** Multiple Choice: How can you add a new key/value pair to an existing object in JavaScript?  
  
- (A) object.add("key", "value");  
- (B) object["key"] = "value";  
- (C) object.insert("key", "value");  
- (D) object.key("value");

**Question 45 (ID: 1.9.9):** True/False: Table headers created with `<th>` are automatically bolded and centered by default in most browsers.

**Question 46 (ID: 2.6.7):** Multi-Select: Which CSS properties can be used to control the position of an element when `position: absolute;` or `position: relative;` is set? (Select all that apply)  
 - (A) top  
 - (B) left  
 - (C) bottom  
 - (D) right

**Question 47 (ID: 3.2.4):** Multiple Choice: What does the following compound assignment operation do?  
x += 2;  
- (A) Adds 2 to x and stores the result in x  
- (B) Subtracts 2 from x and stores the result in x  
- (C) Multiplies x by 2 and stores the result in x  
- (D) Divides x by 2 and stores the result in x

**Question 48 (ID: 3.11.7):** Multiple Choice: Which of the following methods converts a string to lowercase?  
  
- (A) `toUpperCase()`  
- (B) `toLowerCase()`  
- (C) `split()`  
- (D) `concat()`

**Question 49 (ID: 1.5.6):** True/False: The <img> tag can be used to embed a video file into a webpage.

**Question 50 (ID: 4.7.9):** Multiple Choice: What is the difference between `innerHTML` and `textContent` in the DOM?  
  
- (A) `innerHTML` sets both HTML and text content, while `textContent` sets only the text content.  
- (B) `textContent` can be used to set HTML content, but `innerHTML` cannot.  
- (C) `textContent` preserves HTML formatting, while `innerHTML` does not.  
- (D) `innerHTML` and `textContent` are functionally identical.

# Answers

**Answer to Question 1:** (C) The `while` loop checks the condition before running the loop body, while the `do-while` loop checks the condition after.

**Answer to Question 2:** (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 3:** (B) The image floats to the left, and text wraps around it on the right

**Answer to Question 4:** (B) Hello JavaScript!

**Answer to Question 5:** (B) babble matches!, flab matches!

**Answer to Question 6:** (A) `+=`, (B) `-=`, (C) `\*\*=`

**Answer to Question 7:** (A) 2

**Answer to Question 8:** (A) It specifies the URL where the form data should be sent.

**Answer to Question 9:** True

**Answer to Question 10:** (D) Both (A) and (C)

**Answer to Question 11:** (A) for (let key in object), (C) Object.keys(object).forEach(), (D) for (let value of Object.values(object))

**Answer to Question 12:** (B) `colspan`

**Answer to Question 13:** (A) div p

**Answer to Question 14:** (A) It removes a CSS property from an element's inline style.

**Answer to Question 15:** (D) root em (rem)

**Answer to Question 16:** (B) href

**Answer to Question 17:** (C) The font type used for text rendering

**Answer to Question 18:** (B) The input field turns light blue when it gains focus.

**Answer to Question 19:** (A) A hash (#)

**Answer to Question 20:** (C) 11

**Answer to Question 21:** (B) window.location.protocol

**Answer to Question 22:** (C) `<aside>`

**Answer to Question 23:** (A) document.getElementById(), (B) document.createElement(), (C) document.addEventListener()

**Answer to Question 24:** (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 25:** (A) It provides a hint to the user as to what value should be entered.

**Answer to Question 26:** (B) Removes whitespace from both ends of a string.

**Answer to Question 27:** (B) document.getElementById()

**Answer to Question 28:** (B) They are collapsed into a single space.

**Answer to Question 29:** (C) To create a new element node

**Answer to Question 30:** (A) let sum = (a, b) => { return a + b; }

**Answer to Question 31:** (A) They allow embedding expressions into strings.

**Answer to Question 32:** (B) It registers an event handler to respond to a specific event.

**Answer to Question 33:** (A) 10

**Answer to Question 34:** False

**Answer to Question 35:** (A) "Truthy"

**Answer to Question 36:** (C) ReferenceError

**Answer to Question 37:** (B) To temporarily disable code without deleting it

**Answer to Question 38:** (B) "on"

**Answer to Question 39:** (A) `===`, (B) `!=`, (D) `<=`

**Answer to Question 40:** (B) The previous element node that shares the same parent.

**Answer to Question 41:** (A) The name and value of the selected radio button.

**Answer to Question 42:** (A) `new Date()`, (B) `new Date("2024-01-01")`, (C) `new Date(2024, 0, 1)`, (D) `new Date(1000)`

**Answer to Question 43:** False

**Answer to Question 44:** (B) object["key"] = "value";

**Answer to Question 45:** True

**Answer to Question 46:** (A) top, (B) left, (C) bottom, (D) right

**Answer to Question 47:** (A) Adds 2 to x and stores the result in x

**Answer to Question 48:** (B) `toLowerCase()`

**Answer to Question 49:** False

**Answer to Question 50:** (A) `innerHTML` sets both HTML and text content, while `textContent` sets only the text content.