



Competency Test - Modern JavaScript Concepts

Below is a scored review of your assessment. All questions are shown.



Correct Answer



Partially Correct



Incorrect Answer

21

What are some differences in the RegExp literal notation and constructor? Select all that apply.

Your Answer

The literal notation's parameters are enclosed between slashes and have no quotation marks
The constructor function does not use slashes but has quotes
The constructor is evaluated at runtime

Correct Answer

The literal notation's parameters are enclosed between slashes and have no quotation marks
The literal notation is evaluated at compile time
The constructor function does not use slashes but has quotes
The constructor is evaluated at runtime

Explanation

All of the above are correct.

22

What will be the output of the following code snippet?

```
function getAge() {  
  'use strict';  
  age = 21;  
  console.log(age);  
}  
getAge();
```

Your Answer

TypeError

Correct Answer

ReferenceError

Explanation

With "use strict", you can make sure that you don't accidentally declare global variables. We never declared the variable age, and since we use "use strict", it will throw a reference error. If we didn't use "use strict", it would have worked, since the property age would have gotten added to the global object.

23

Which of the following is the correct regular expression for matching a string that contains at least one uppercase letter, one lowercase letter, and one digit?

Your Answer`/(?=[A-Z])(?=[a-z])(?=\d)./`**Correct Answer**`/(?=[A-Z])(?=[a-z])(?=\d)./`

Explanation

The lookaheads `(?=...)` assert that the pattern inside the parentheses must match, but do not include the matched text in the result. The `'.'` at the end matches any remaining characters in the string.

24

What will be the output of the following code snippet?

```
const a = [1, 2, 3];  
const b = a.reduce((acc, x) => acc.concat([x * x]), []);  
console.log(b);
```

Your Answer [1, 4, 9]

Correct Answer [1, 4, 9]

Explanation

The `reduce()` function applies a function to each element of an array and accumulates the results into a single value. In this case, the function squares each element of the array and concatenates the result to the accumulator, resulting in `[1, 4, 9]`.

25

Which of the following regular expressions matches a string that starts with "http://" or "https://"?

Your Answer `/(http|https)://`

Correct Answer `/(http|https)://`

Explanation

The "|" operator matches either "http" or "https". The "/" is used to escape the forward slash character.

26

Which of the following regular expression patterns matches a string that contains at least one uppercase letter, one lowercase letter, and one digit?

Your Answer `/[a-zA-Z0-9]/`

Correct Answer `^d[a-z][A-Z]/`

Explanation

The regular expression pattern `^(?=.*\d)(?=.*[a-z])(?=.*[A-Z]).$/` matches a string that contains at least one digit, one lowercase letter, and one uppercase letter in any order. The other patterns do not provide a comprehensive way of matching all three criteria.

27

What will be the output of the following code snippet?

```
let numbers = [1, 2, 3];  
let doubledNumbers = numbers.map((num) =>{  
  num * 2;  
});  
console.log(doubledNumbers);
```

Your Answer

[undefined, undefined, undefined]

Correct Answer

[undefined, undefined, undefined]

Explanation

Arrow functions implicitly return a value if there are no curly braces surrounding the function body. Therefore, the 'doubledNumbers' array is filled with undefined values because the return statement is missing.

28

Will the following JavaScript code work?

```
var tensquared = (function(x) {  
  return x * x;  
})(10));
```

Your Answer

Yes, perfectly

Correct Answer

Yes, perfectly

Explanation

Function name is optional for functions defined as expressions. Function expressions are sometimes defined and immediately invoked.

29

Which of the following is NOT a new feature in ES6?

Your Answer

Callbacks

Correct Answer

Callbacks

Explanation

Callbacks are not a new feature in ES6, they have been available in previous versions.

30

What will the code below output to the console and why?

```
let max;  
const numberArray = [3, 5, 2];  
numberArray.forEach((element) => {  
  if (max < element) {  
    max = element;  
  }  
});  
console.log(max);
```

Your Answer undefined

Correct Answer undefined

Explanation

The variable max was not initialized but was used in an evaluation. The evaluation will not behave as expected.

31 Which of the following regular expressions matches any string that starts with "hello" and ends with "world"?

Your Answer `/^hello.*world$/`

Correct Answer `/^hello.*world$/`

Explanation

The "^" and "\$" symbols represent the start and end of the string, respectively. The "." matches any number of characters between "hello" and "world".

32 Which of the following best describes function composition in functional programming?

Your Answer Combining two or more functions to create a new function that can be applied to an argument

Correct Answer Combining two or more functions to create a new function that can be applied to an argument

Explanation

Function composition is a technique in functional programming that involves combining two or more functions to create a new function that can be applied to an argument. In this technique, the output of one function is used as the input to another function, and so on, until a final result is produced.

33

What will be the output of the following code snippet?

```
console.log([1, 2, 3].map(num => {  
  if (typeof num === 'number') return;  
  return num * 2;  
}));
```

Your Answer

[undefined, undefined, undefined]

Correct Answer

[undefined, undefined, undefined]

Explanation

When mapping over the array, the value of num is equal to the element it's currently looping over. In this case, the elements are numbers, so the condition of the if statement `typeof num === "number"` returns true. The map function creates a new array and inserts the values returned from the function. However, we don't return a value. When we don't return a value from the function, the function returns undefined. For every element in the array, the function block gets called, so for each element we return undefined.

34 Which of the following best describes declarative code in functional programming?

Your Answer Code that specifies what the result of a task should be without specifying how to get it

Correct Answer Code that specifies what the result of a task should be without specifying how to get it

Explanation

3

35 Which of the following is a correct way to define a private property in a class in ES6?

Your Answer `this.#myProp = value;`

Correct Answer `this.#myProp = value;`

Explanation

The '#' symbol can be used to define private properties in classes in ES6.

36

What will be the output of the following code snippet?

```
let myString = "hello world";  
let [a, b, c, d, e, f, g, h, i, j, k] = myString;  
console.log(k);
```

Your Answer

"d"

Correct Answer

"d"

Explanation

In this example, the destructuring assignment extracts the 11th character of the 'myString' variable, which is "d".

37

Which of the following regular expressions matches a string that contains at least one digit?

Your Answer `/^[0-9]+$`

Correct Answer `/^[0-9]+$`

Explanation

The "+" operator matches one or more of the preceding character set. The "^" and "\$" symbols represent the start and end of the string, respectively.

38

Which of the following is a benefit of functional programming?

Your Answer

Simpler code that is easier to debug and test

Correct Answer

Simpler code that is easier to debug and test

Explanation

Functional programming emphasizes immutable data and pure functions, which reduces complexity and makes code easier to reason about, debug, and test.

39

What does the "debugger" statement do in JavaScript?

Your Answer

inserts a breakpoint in the code for debugging

Correct Answer

inserts a breakpoint in the code for debugging

Explanation

The "debugger" statement can be used to pause the execution of JavaScript code and allow for debugging in the browser's developer tools.

40 What is a higher order function?

Your Answer

A function that can take a function as an argument, or that returns another function

Correct Answer

A function that can take a function as an argument, or that returns another function

Explanation

A higher order function is a function that can take another function as an argument or return another function as its result. In other words, a higher order function is a function that operates on functions.

Summary

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