

#### Mid Course Quiz Assessment - Introduction to Computer Programming

Correct Answer	Partially Correct	Incorrect Answer

What is the difference between a function expression and an IIFE (Immediately Invoked Function Expression) in JavaScript?

Your Answer An IIFE is often used to create a private scope for variables,

whereas a function expression is not.

**Correct Answer** All of the above.

#### Explanation

A function expression is a regular function that can be called later, and it is defined using the function keyword or as an arrow function. An IIFE is a function that is called immediately after it is defined, and it is defined using parentheses and the function keyword. An IIFE is often used to create a private scope for variables by encapsulating the code within the function, whereas a function expression is not typically used for this purpose. Therefore, option d is correct.

What is the result of the following expression: true || false && true;

Your Answer True

Correct Answer True

# Explanation

You are Correct !! In JavaScript, the && operator has higher precedence than the || operator, so the expression is evaluated as true || (false && true). The && operator evaluates from left to right and returns the first operand if it can be converted to false; otherwise, it returns the second operand. In this case, false && true evaluates to false, and true || false evaluates to true.

What will be the output of the following code?

```
var x = 5;
if (x === "5") {
console.log("Hello");
} else {
console.log("World");
}
```

Your Answer World

Correct Answer World

# Explanation

The if statement checks whether x is strictly equal to the string "5". Since x is a number, not a string, and is not equal to the string "5", the else block will execute and "World" will be printed to the console.

Which of the following statements about dynamically typed languages is true?

Your Answer These are the languages which provide more flexibility and

the interpreter assigns the variable's type at runtime based on

its value at the moment.

Correct Answer These are the languages which provide more flexibility and

the interpreter assigns the variable's type at runtime based on

its value at the moment.

# Explanation

You are Correct !! Dynamically typed languages provide more flexibility in programming, as the data type of a variable is determined at runtime and can be changed if necessary.

What is the output of the following code snippet?

```
function myFunc(a, b) {
console.log(this, a, b);
}
var myObject = {
myMethod: myFunc
};
myObject.myMethod.call({x: 1}, 1, 2);
```

Your Answer `{x: 1}`, 1, 2

Correct Answer `{x: 1}`, 1, 2

### Explanation

The call method can be used to call a function with a specified this value and arguments. In this code snippet, myMethod is called with a this value of  $\{x: 1\}$  and arguments 1 and 2. Therefore, the output of the console.log() statement will be  $\{x: 1\}$ , 1, 2.

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If a function is called with less parameters than the declared amount of parameters, what value is assigned to the missing parameters?

Your Answer undefined

Correct Answer undefined

# Explanation

If a function is called with fewer parameters than the declared number of parameters, the missing parameters are assigned the value of undefined.

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Your Answer True

Correct Answer True

# Explanation

A class level variable, also known as a static variable, can be accessed in any method, including static methods and constructors.

What will the code below output to the consol?

```
let scope = "global";
const getScope = () => {
let scope = "local";
const inner = () => {
  return scope;
};
return inner;
};
console.log(getScope()());
```

Your Answer local

Correct Answer local

# Explanation

The inner arrow function has the scope of the location it was defined.

What is the output of the following code?
let person1 = {name: "John", age: 30};
let person2 = {name: "Jane", age: 25};
let persons = {...person1, ...person2};
console.log(persons);

Your Answer {name: "Jane", age: 25}

Correct Answer {name: "Jane", age: 25}

### Explanation

The code creates two objects, person1, and person2, with name and age properties. The spread operator is used to merge the properties of both objects into a new object called persons. The resulting persons object has the name property set to "Jane" and the age property set to 25.

What will be the output of the following code snippet?

```
let arr = [1, 2, 3];
let newArr = arr.filter(x => x > 1);
console.log(newArr);
```

Your Answer [2,3]

Correct Answer [2,3]

# Explanation

The filter() method is used to create a new array containing only the elements that pass a certain condition. In this case, it creates a new array newArr containing only the elements of arr that are greater than 1 (i.e., 2 and 3).

Which of the following programming languages is mainly used for web development?

Your Answer JavaScript

Correct Answer Java

JavaScript

### Explanation

You are Incorrect !! JavaScript and Java are the programming languages that are used for web development. They are primarily used to create interactive web pages and web applications

What will be the output of the following code snippet?

```
var i = 0;
while (i < 3) {
  console.log(i);
  i++;
}</pre>
```

Your Answer 0123

**Correct Answer** 1/2/2000 12:00:00 AM

#### Explanation

The while loop executes while the condition is true. In this case, the loop starts with i = 0 and increments i on each iteration until i is no longer less than 3. Therefore, the output is 0, 1, 2.

What is the result of the following expression:

Your Answer 7

Correct Answer 7

### Explanation

You are Correct !! The += operator adds the value on the right-hand side to the variable on the left-hand side and assigns the result to the variable. In this case, x += 2 is equivalent to x = x + 2, which results in x being assigned the value of 7.

#### What is the purpose of the apply() method in JavaScript?

**Your Answer** To call a function with a specified context and arguments

passed as an array.

**Correct Answer** To call a function with a specified context and arguments

passed as an array.

#### Explanation

The apply() method is used to call a function with a specified context and arguments passed as an array. The first argument to the apply() method is the context in which the function should be called, and the second argument is an array of arguments to be passed to the function. This can be useful when the number of arguments to be passed to the function is not known in advance or when the arguments are stored in an array. Therefore, option a is correct.

What does it mean when JavaScript is described as having "first-class functions"?

Your Answer functions are treating like any other variable

**Correct Answer** functions are treating like any other variable

# Explanation

This allows functions to be passed as parameters, returned from functions, and more.

What is the output of the following code snippet?

```
let num = 5;
if (num > 10) {
  console.log("Hello");
}
else if (num < 0) {
  console.log("Goodbye");
}
else {
  console.log("Neither");
}</pre>
```

Your Answer Neither

Correct Answer Neither

#### Explanation

The variable num is assigned the value 5. The if statement checks if num is greater than 10, which is false. The else if statement checks if num is less than 0, which is also false.

Therefore, the code block within the else statement is executed, which logs the string "Neither" to the console.

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

```
const badCode = () => {
let arr = [1, 2, 3, 4];
const inner = () => {
  return arr.pop();
};
return inner;
};
console.log(badCode()());
```

Your Answer 4

Correct Answer 4

#### Explanation

The badCode function returns a reference to the inner function, which is defined inside badCode and has access to the arr variable in the outer function. The inner function calls the pop() method on arr with an argument of 2, which is not a valid argument for the pop() method. However, when an invalid argument is passed to pop(), it is ignored and the last element of the array is removed.

What is the syntax of the ternary operator in JavaScript?

Your Answer condition ? expression1 : expression2

Correct Answer condition ? expression1 : expression2

# Explanation

You are Correct !! The ternary operator is a shorthand way of writing an if-else statement in JavaScript. The syntax consists of a condition followed by a question mark, followed by an expression to evaluate if the condition is true, followed by a colon, and finally, an expression to evaluate if the condition is false.

Which of the following programming paradigms focuses on the use of rules and constraints to describe a problem domain?

Your Answer Logical Programming

Correct Answer Logical Programming

# Explanation

You are Correct !! Logic programming is a programming paradigm that is based on the use of rules and constraints to describe a problem domain. It uses logical inference to derive new facts from existing ones, and is often used in artificial intelligence and expert systems.

What is the difference between a parameter and an argument in a JavaScript function?

**Your Answer** A parameter is a variable declared in the function body,

whereas an argument is a value passed into a function.

**Correct Answer** A parameter is a variable declared in the function body,

whereas an argument is a value passed into a function.

#### Explanation

A parameter is a variable declared in the function definition, whereas an argument is a value passed into the function when it is called. Therefore, option b is correct.

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