### 1. Which of the following statements about C# is correct?

- [ ] C# is a statically typed language.

- [ ] C# supports multiple inheritance.

- [ ] C# code is compiled into machine code.

- [ ] C# is case-insensitive.

\*\*Answer:\*\* `[✓] C# is a statically typed language.`

---

### 2. What is the correct way to create an instance of a class in C#?

- [ ] `MyClass obj = new MyClass();`

- [ ] `MyClass obj;`

- [ ] `MyClass obj = MyClass();`

- [ ] `MyClass obj = class MyClass;`

\*\*Answer:\*\* `[✓] MyClass obj = new MyClass();`

---

### 3. Which of the following methods can be overridden in a derived class?

- [ ] A static method.

- [ ] A private method.

- [ ] A virtual method.

- [ ] An abstract method.

\*\*Answer:\*\* `[✓] A virtual method.`, `[✓] An abstract method.`

---

### 4. Which of the following is correct about exception handling in C#?

- [ ] `finally` block is always executed.

- [ ] Multiple `catch` blocks can be used for different exceptions.

- [ ] A `try` block can exist without a `catch` block.

- [ ] `throw` keyword is used to catch exceptions.

\*\*Answer:\*\* `[✓] finally block is always executed.`, `[✓] Multiple catch blocks can be used for different exceptions.`, `[✓] A try block can exist without a catch block.`

---

### 5. Which of the following data types is not a value type in C#?

- [ ] `int`

- [ ] `string`

- [ ] `float`

- [ ] `char`

\*\*Answer:\*\* `[✓] string`

---

### 6. Which of the following operators can be overloaded in C#?

- [ ] `+`

- [ ] `-`

- [ ] `=`

- [ ] `&&`

\*\*Answer:\*\* `[✓] +`, `[✓] -`

---

### 7. What is the output of the following code snippet?

```csharp

int a = 5;

Console.WriteLine(++a);

```

- [ ] 4

- [ ] 5

- [ ] 6

- [ ] Compiler Error

\*\*Answer:\*\* `[✓] 6`

---

### 8. Which of the following keywords is used to inherit a class in C#?

- [ ] `inherit`

- [ ] `extend`

- [ ] `base`

- [ ] `:`

\*\*Answer:\*\* `[✓] :`

---

### 9. What does the `is` keyword do in C#?

- [ ] Checks if an object is a specific type.

- [ ] Compares two objects for equality.

- [ ] Checks if an object implements an interface.

- [ ] Declares an instance of a class.

\*\*Answer:\*\* `[✓] Checks if an object is a specific type.`

---

### 10. Which of the following statements is true about the `readonly` keyword in C#?

- [ ] It can only be assigned in the constructor.

- [ ] It can be modified anytime during the program execution.

- [ ] It is similar to the `const` keyword.

- [ ] It is evaluated at runtime.

\*\*Answer:\*\* `[✓] It can only be assigned in the constructor.`, `[✓] It is evaluated at runtime.`

---

### 11. In C#, which of the following is a correct statement regarding garbage collection?

- [ ] It is manually triggered by the programmer.

- [ ] It automatically frees memory occupied by unreferenced objects.

- [ ] It can be forced using the `GC.Collect()` method.

- [ ] It guarantees immediate destruction of objects.

\*\*Answer:\*\* `[✓] It automatically frees memory occupied by unreferenced objects.`, `[✓] It can be forced using the GC.Collect() method.`

---

### 12. What is the result of the following expression in C#?

```csharp

5 / 2

```

- [ ] 2

- [ ] 2.5

- [ ] 2.0

- [ ] Compiler Error

\*\*Answer:\*\* `[✓] 2`

---

### 13. Which of the following features does C# support?

- [ ] Delegates

- [ ] Lambda expressions

- [ ] Multiple inheritance

- [ ] Interfaces

\*\*Answer:\*\* `[✓] Delegates`, `[✓] Lambda expressions`, `[✓] Interfaces`

---

### 14. What is the correct way to declare an array in C#?

- [ ] `int[] arr = new int[5];`

- [ ] `int arr[] = new int[5];`

- [ ] `int arr[5] = new int[];`

- [ ] `int[5] arr = new int[];`

\*\*Answer:\*\* `[✓] int[] arr = new int[5];`

---

### 15. Which of the following statements is true about `ref` and `out` parameters in C#?

- [ ] `ref` requires the variable to be initialized before passing.

- [ ] `out` requires the variable to be initialized before passing.

- [ ] `ref` does not require the variable to be initialized before passing.

- [ ] `out` does not require the variable to be initialized before passing.

\*\*Answer:\*\* `[✓] ref requires the variable to be initialized before passing.`, `[✓] out does not require the variable to be initialized before passing.`

---

### 16. Which of the following statements is true regarding nullable types in C#?

- [ ] Value types can be made nullable using `?`.

- [ ] Nullable types are only applicable to reference types.

- [ ] Nullable types can represent a value or no value.

- [ ] Nullable types cannot be used in expressions.

\*\*Answer:\*\* `[✓] Value types can be made nullable using ?`, `[✓] Nullable types can represent a value or no value.`

---

### 17. Which of the following is true about LINQ in C#?

- [ ] It stands for Language Integrated Query.

- [ ] It is used for querying databases only.

- [ ] It can query arrays and collections.

- [ ] It is a feature only in .NET Core.

\*\*Answer:\*\* `[✓] It stands for Language Integrated Query.`, `[✓] It can query arrays and collections.`

---

### 18. What is the output of the following code?

```csharp

int x = 10;

int y = x++;

Console.WriteLine(y);

```

- [ ] 9

- [ ] 10

- [ ] 11

- [ ] Compiler Error

\*\*Answer:\*\* `[✓] 10`

---

### 19. Which of the following statements about the `sealed` keyword is true?

- [ ] It prevents a class from being inherited.

- [ ] It allows a method to be overridden.

- [ ] It is used to create immutable classes.

- [ ] It cannot be used with methods.

\*\*Answer:\*\* `[✓] It prevents a class from being inherited.`

---

### 20. Which of the following collections in C# guarantees unique elements?

- [ ] `List<T>`

- [ ] `Dictionary<TKey, TValue>`

- [ ] `HashSet<T>`

- [ ] `Queue<T>`

\*\*Answer:\*\* `[✓] HashSet<T>`

---

### 21. Which of the following methods belongs to the `System.Object` class?

- [ ] `ToString()`

- [ ] `Equals()`

- [ ] `Clone()`

- [ ] `GetHashCode()`

\*\*Answer:\*\* `[✓] ToString()`, `[✓] Equals()`, `[✓] GetHashCode()`

---

### 22. What does the `as` keyword do in C#?

- [ ] Casts an object to a specified type.

- [ ] Performs a safe type conversion.

- [ ] Throws an exception if the conversion fails.

- [ ] Returns `null` if the conversion fails.

\*\*Answer:\*\* `[✓] Casts an object to a specified type.`, `[✓] Returns null if the conversion fails.`

---

### 23. Which of the following is a valid syntax for a lambda expression in C#?

- [ ] `x => x + 1`

- [ ] `(x, y) => x \* y`

- [ ] `() => Console.WriteLine("Hello");`

- [ ] `x, y => x + y`

\*\*Answer:\*\* `[✓] x => x + 1`, `[✓] (x, y) => x \* y`, `[✓] () => Console.WriteLine("Hello");`

---

### 24. Which of the following statements about interfaces in C# is true?

- [ ] An interface can contain fields.

- [ ] An interface can contain method implementations.

- [ ] A class can implement multiple interfaces.

- [ ] Interfaces support multiple inheritance.

\*\*Answer:\*\* `[✓] A class can implement multiple interfaces.`, `[✓] Interfaces support multiple inheritance.`

---

### 25. What is the output of the following code?

```csharp

int[] arr = { 1, 2, 3, 4, 5 };

Console.WriteLine(arr[5]);

```

- [ ] 5

- [ ] 0

- [ ] IndexOutOfRangeException

- [ ] Compiler Error

\*\*Answer:\*\* `[✓] IndexOutOfRangeException`

---

### 26. What does the `params` keyword in C# allow?

- [ ] Passing a

variable number of arguments to a method.

- [ ] Passing parameters by reference.

- [ ] Passing an array of arguments.

- [ ] Passing parameters by value.

\*\*Answer:\*\* `[✓] Passing a variable number of arguments to a method.`, `[✓] Passing an array of arguments.`

---

### 27. Which of the following types are reference types in C#?

- [ ] `object`

- [ ] `string`

- [ ] `Array`

- [ ] `int`

\*\*Answer:\*\* `[✓] object`, `[✓] string`, `[✓] Array`

---

### 28. Which of the following statements is correct about constructors in C#?

- [ ] Constructors can be overloaded.

- [ ] Constructors cannot be inherited.

- [ ] A constructor can return a value.

- [ ] Constructors can be private.

\*\*Answer:\*\* `[✓] Constructors can be overloaded.`, `[✓] Constructors cannot be inherited.`, `[✓] Constructors can be private.`

---

### 29. What is the output of the following code?

```csharp

string s = "Hello";

s += " World";

Console.WriteLine(s.Length);

```

- [ ] 5

- [ ] 6

- [ ] 11

- [ ] 12

\*\*Answer:\*\* `[✓] 11`

---

### 30. Which of the following statements is true about `enum` in C#?

- [ ] Enums are value types.

- [ ] Enums can have methods.

- [ ] Enums can have fields.

- [ ] Enums can have multiple values.

\*\*Answer:\*\* `[✓] Enums are value types.`, `[✓] Enums can have methods.`

---

### 31. Which of the following is correct regarding indexers in C#?

- [ ] They allow objects to be indexed like arrays.

- [ ] They can have multiple parameters.

- [ ] They must be declared with the `this` keyword.

- [ ] They can be static.

\*\*Answer:\*\* `[✓] They allow objects to be indexed like arrays.`, `[✓] They must be declared with the this keyword.`

---

### 32. Which of the following statements is true about partial classes in C#?

- [ ] They allow splitting the definition of a class across multiple files.

- [ ] All parts must be in the same namespace.

- [ ] They can have different access modifiers.

- [ ] Partial methods must have a return type.

\*\*Answer:\*\* `[✓] They allow splitting the definition of a class across multiple files.`, `[✓] All parts must be in the same namespace.`

---

### 33. What is the default access modifier for members of a class in C#?

- [ ] `public`

- [ ] `private`

- [ ] `protected`

- [ ] `internal`

\*\*Answer:\*\* `[✓] private`

---

### 34. Which of the following statements is true about events in C#?

- [ ] They can be declared using the `event` keyword.

- [ ] Events can be static.

- [ ] Events can return a value.

- [ ] Events are used with delegates.

\*\*Answer:\*\* `[✓] They can be declared using the event keyword.`, `[✓] Events can be static.`, `[✓] Events are used with delegates.`

---

### 35. What is the purpose of the `yield` keyword in C#?

- [ ] To return an iterator from a method.

- [ ] To create a generator function.

- [ ] To return multiple values from a method.

- [ ] To pause execution and return to the calling method.

\*\*Answer:\*\* `[✓] To return an iterator from a method.`, `[✓] To pause execution and return to the calling method.`

---

### 36. Which of the following is correct regarding properties in C#?

- [ ] Properties can have `get` and `set` accessors.

- [ ] Properties can be read-only.

- [ ] Properties can have different access levels for `get` and `set`.

- [ ] Properties cannot be static.

\*\*Answer:\*\* `[✓] Properties can have get and set accessors.`, `[✓] Properties can be read-only.`, `[✓] Properties can have different access levels for get and set.`

---

### 37. Which of the following statements about anonymous methods in C# is correct?

- [ ] They can be used to create inline delegates.

- [ ] They cannot access variables outside their scope.

- [ ] They do not have a return type.

- [ ] They can be used in place of lambda expressions.

\*\*Answer:\*\* `[✓] They can be used to create inline delegates.`, `[✓] They can be used in place of lambda expressions.`

---

### 38. What is the purpose of the `checked` keyword in C#?

- [ ] To check the syntax of a block of code.

- [ ] To enable overflow checking for arithmetic operations.

- [ ] To verify the integrity of data.

- [ ] To prevent exceptions from being thrown.

\*\*Answer:\*\* `[✓] To enable overflow checking for arithmetic operations.`

---

### 39. Which of the following statements is true about the `StringBuilder` class in C#?

- [ ] It is immutable.

- [ ] It is used for efficient string manipulations.

- [ ] It belongs to the `System.Text` namespace.

- [ ] It cannot be resized after creation.

\*\*Answer:\*\* `[✓] It is used for efficient string manipulations.`, `[✓] It belongs to the System.Text namespace.`

---

### 40. What is the result of the following expression in C#?

```csharp

true && false || true

```

- [ ] `true`

- [ ] `false`

- [ ] `Compiler Error`

- [ ] `null`

\*\*Answer:\*\* `[✓] true`

---

### 41. Which of the following statements about the `abstract` keyword in C# is correct?

- [ ] Abstract classes cannot be instantiated.

- [ ] Abstract methods must be implemented in derived classes.

- [ ] Abstract classes can have constructors.

- [ ] Abstract methods can have a body.

\*\*Answer:\*\* `[✓] Abstract classes cannot be instantiated.`, `[✓] Abstract methods must be implemented in derived classes.`, `[✓] Abstract classes can have constructors.`

---

### 42. Which of the following statements is correct about the `params` keyword in C#?

- [ ] It allows passing a variable number of arguments to a method.

- [ ] It must be the last parameter in a method.

- [ ] It can only be used with arrays.

- [ ] It can be used with reference types only.

\*\*Answer:\*\* `[✓] It allows passing a variable number of arguments to a method.`, `[✓] It must be the last parameter in a method.`

---

### 43. What is the output of the following code?

```csharp

int a = 10, b = 20;

Console.WriteLine(a > b ? a : b);

```

- [ ] 10

- [ ] 20

- [ ] `true`

- [ ] `false`

\*\*Answer:\*\* `[✓] 20`

---

### 44. Which of the following statements is true about namespaces in C#?

- [ ] They are used to organize classes and interfaces.

- [ ] They prevent naming conflicts.

- [ ] A class can belong to multiple namespaces.

- [ ] Namespaces can be nested.

\*\*Answer:\*\* `[✓] They are used to organize classes and interfaces.`, `[✓] They prevent naming conflicts.`, `[✓] Namespaces can be nested.`

---

### 45. Which of the following statements is true about the `lock` keyword in C#?

- [ ] It is used to ensure that a block of code runs atomically.

- [ ] It prevents multiple threads from accessing a resource simultaneously.

- [ ] It is used for exception handling.

- [ ] It can be used with any value type.

\*\*Answer:\*\* `[✓] It is used to ensure that a block of code runs atomically.`, `[✓] It prevents multiple threads from accessing a resource simultaneously.`

---

### 46. What is the correct way to define a delegate in C#?

- [ ] `delegate int MyDelegate();`

- [ ] `int delegate MyDelegate();`

- [ ] `delegate MyDelegate int();`

- [ ] `MyDelegate delegate int();`

\*\*Answer:\*\* `[✓] delegate int MyDelegate();`

---

### 47. Which of the following statements about the `foreach` loop in C# is correct?

- [ ] It is used to iterate over collections.

- [ ] It modifies the collection during iteration.

- [ ] It cannot be used with arrays.

- [ ] It does not require an explicit index.

\*\*Answer:\*\* `[✓] It is used to iterate over collections.`, `[✓] It does not require an explicit index.`

---

### 48. Which of the following is true about extension methods in C#?

- [ ] They allow adding new methods to existing types.

- [ ] They must be static.

- [ ] They can override existing methods.

- [ ] They require a `this` modifier in the first parameter.

\*\*Answer:\*\* `[✓] They allow adding new methods to existing types.`, `[✓] They must be static.`, `[✓] They require a this modifier in the first parameter.`

---

### 49. What is the purpose of the `finalize` method in C#?

- [ ] It is used to release unmanaged resources.

- [ ] It is called automatically by the garbage collector.

- [ ] It can be overridden in classes.

- [ ] It is used to close open files.

\*\*Answer:\*\* `[✓] It is used to release unmanaged resources.`, `[✓] It is called automatically by the garbage collector.

`, `[✓] It can be overridden in classes.`

---

### 50. What is the result of the following code?

```csharp

int a = 5, b = 10;

a = a + b - (b = a);

Console.WriteLine(a + ", " + b);

```

- [ ] `10, 5`

- [ ] `5, 10`

- [ ] `15, 5`

- [ ] `5, 15`

\*\*Answer:\*\* `[✓] 10, 5`