

1 What is false about Interfaces in C#?

They can be used to allow for multiple inheritance

All methods in an interface must be implemented

Both a class and a struct can implement them

You define an interface with the interface keyword

All of these are true about interfaces

2 What is a using block in C# used for?

To import namespaces

To add references to your class

To dispose unmanaged resources

To handle exceptions with a try/finally structure

3 Is C# a strongly typed language, what is a strongly typed language?

Yes, each type of data is predefined as part of the programming language

Yes, data types do not have to be explicitly called

No, each type of data is predefined as part of the programming language

No, data types do not have to be explicitly called

4 In C#, one class can inherit from multiple base classes.

TRUE

FALSE

5 Which of the following is the correct operator to compare two variables?

Which of the following is the correct operator to compare two variables?

: =

=

Equal

6 Which of the following is not a valid data type?

Which of the following is not a valid data type?

7 The first index number in an array starts with and the highest index number of an array of size n will be

The first index number in an array starts with and the highest index number of an array of size n will be

0, n

1, n

8 Which of the following two entities (reading from Left to Right) can be connected by the dot operator?

Which of the following two entities (reading from Left to Right) can be connected by the dot operator?

A class member and a class object.

A class object and a class.

A class and a member of that class.

A class object and a member of that class.

9 What is garbage collection?

What is garbage collection?

The process of negating methods from a super class.

The process of de-allocating memory automatically.

The process of restoring orphaned objects.

The process of creating a new object.

10 What is true about a class?

What is true about a class?

It should be private always.

It is blueprint for a schema.

It may contain any number of variables and methods.

It should contain at least one variable and at least one method.

11 An If-Else statement is used for handling thrown Exceptions

TRUE

FALSE

12 Which of the following are the correct ways to increment the value of variable a by 1?

1. `++a++;`
2. `a += 1;`
3. `a ++ 1;`
4. `a = a +1;`
5. `a = +1;`

2,4

1,2

5,1

3,4

None of these

13 Which of the following is NOT an Arithmetic operator in C#.NET?

+

/

%

14 Which of the following statements are correct about static functions?

1. Static functions can access only static data.
2. Static functions cannot call instance functions.
3. It is necessary to initialize static data.

4. Instance functions can call static functions and access static data.
5. *this* reference is passed to static functions.

2, 5, 4

1, 2, 4

4, 5

5, 1

15 Which of the following can be facilitated by the Inheritance mechanism?

1. Use the existing functionality of base class.
2. Override the existing functionality of base class.
3. Implement new functionality in the derived class.
4. Implement polymorphic behaviour.
5. Implement containership.

1, 2, 3

2, 4

3, 5

2 4 5

None of these

16 Which of the following statements are correct about the C#.NET code snippet given below?

```
namespace IndiabixConsoleApplication
{
    class index
    {
        protected int count;
        public index()
        {
            count = 0;
        }
    }
    class index1: index
    {
        public void increment()
        {
            count = count +1;
        }
    }
    class MyProgram
    {
        static void Main(string[] args)
        {
            index1 i = new index1();
            i.increment();
        }
    }
}
```

1. *count* should be declared as *public* if it is to become available in the inheritance chain.
2. *count* should be declared as *protected* if it is to become available in the inheritance chain.
3. While constructing an object referred to by *i* firstly constructor of *index* class will be called followed by constructor of *index1* class.
4. Constructor of *index* class does not get inherited in *index1* class.
5. *count* should be declared as *Friend* if it is to become available in the inheritance chain.

1,2,5

2,3,4

1,3,2

1,5

None of these

17 What will be the size of the object created by the following C#.NET code snippet?

```
namespace IndiabixConsoleApplication
{
    class Baseclass
    {
        private int i;
        protected int j;
        public int k;
    }
    class Derived: Baseclass
    {
        private int x;
        protected int y;
        public int z;
    }
    class MyProgram
    {
        static void Main (string[ ] args)
        {
            Derived d = new Derived();
        }
    }
}
```

24 bytes

12 bytes

20 bytes

10 bytes

16 bytes

18 Which of the following statements are correct about data types?

1. If the integer literal exceeds the range of *byte*, a compilation error will occur.
2. We cannot implicitly convert non-literal numeric types of larger storage size to *byte*.
3. *Byte* cannot be implicitly converted to *float*.
4. A *char* can be implicitly converted to only *int* data type.
5. We can cast the integral character codes.

1,2,5

2,5,4

4,5

3,5

19 Which of the following is an 8-byte Integer?

Char

Long

Short

Byte

Integer

20 Which of the following control statements is incorrect?

if (condition) else if {*//some code*}

if (condition1) else if {*//some code*} else {*//some code*}

if (condition) else {*//some code*}

if (condition1) else {*//some code*} else if (condition2) {*//some code*}

21 How do you access a private field that is a member of a class?

With a public property to get and set the private field.

Use the dot '.' operator to access the field like other class members.

Its not possible.

With a private property to get and set the private field.

22 Used in a class definition, what is the purpose of the protected access modifier?

To hide access to the field from outside the class except a derived class.

To ensure a class field is read-only from outside the class.

To ensure class field is read-only from outside the class except a derived class.

To hide access to the field from outside the class by all.

23 Which of the following sets are assignment operators?

`*, +=, =, /=`

`*, ==, !=, +=`

`*, =, >=, +=`

`*, ==, <=, -=`

24 In a Switch statement, if the value of the expression is not represented by a case what will happen?

the default case will execute if provided in the switch statement.

Nothing, program execution continues to the statement after the switch.

The program will throw an error and crash.

The last case is executed.

25 In a literal string, which character is used to start an escape sequence?

\

@

!

%

26 What is the output for the following code?

```
bool b1 = 1 < 0;  
bool b2 = !(12 % 3 > 2);  
if (b1 = b2)  
    Console.Write("true: ");  
else  
    Console.Write("false: ");  
Console.WriteLine("b1 is {0}. b2 is {1}.", b1, b2);
```

true: b1 is False. b2 is False.

false: b1 is False. b2 is True.

false: b1 is False. b2 is False.

true: b1 is True. b2 is True.

27 What is the output for the following code?

```
int i = 9;  
double j = 0.2;  
Console.WriteLine(++i/j-i++);
```

35

36

39

40

28 Which of the following is not a value type?

Double

Char

Integer

Array

29 Which loop prints the elements of an integer array called arr?

while (int x=0; x < arr; x++) { Console.WriteLine(x); }

for (int x=0; x < arr; x++) { Console.WriteLine(x); }

```
foreach (int x in arr) { Console.WriteLine(x); }
```

```
do { Console.WriteLine(x); } while (int x=0; x < arr; x++);
```

30 Given a class Robot, which is the correct way to instantiate an object?

```
Robot droid = new Robot();
```

```
Robot droid = Robot();
```

```
droid = new Robot();
```

```
Robot droid;
```

31 What is the correct output of the following code sample?

```
namespace eIntern {  
class Robot {  
    string type;  
    double speed;  
    public void SetRobot(double speed) {  
        type = "hover";  
        speed = speed;  
    }  
    public void Output() {  
        Console.WriteLine(type + "bot has speed " + speed);  
    }  
}  
class Program {  
    static void Main(string[] args) {  
        Robot droid = new Robot();  
        droid.SetRobot(32);  
        droid.Output();  
    }  
}  
}
```

hoverbot has speed 0

hoverbot has speed 32

hoverbot has speed 32.0

Error will prevent code from executing.

32 Within a class definition, what is the default access modifier for a class member without one?

private

public

protected

internal

33 What value is returned by the following method signature?

```
protected void MyMethod();
```

None.

Null.

0

True.

34 For a class definition with 2 fields, how many parameters does a default constructor have?

2

3

0

1

35 Which of the following is an incorrect signature for a constructor for a Robot class?

public void Robot(int speed)

public Robot()

public Robot(int speed)

public Robot(int speed, string type)

36 Given an ArrayList arList, how do you get the number of elements in arList?

arList.Count

arList.Length

arList.MaxIndex

arList.Capacity

37 For a Stack type of collection, which of the following is a valid method?

Pop

Insert

Add

Append

38 At most, how many times can a value be repeated in a Dictionary collection?

Unlimited.

It must be unique.

2**3**

39 What is the correct way to declare and instantiate a List collection?

```
List<int> numbers = new List<int>();
```

```
List numbers = new List();
```

```
List[] numbers = new List[int]();
```

```
List<> numbers = new List<int>();
```

40 Of the following collections, which is not considered dynamic?

string[]

List

Dictionary

ArrayList

41 Provided a List with 10 names, which is the correct way to get the name at 5th position in the List?

names[4];

names.ElementAt(5);

names.ItemAt(5);

names.AtIndex(4);

42

Given the following class and interface signatures, which is the best way to apply multiple inheritance to DerivedRobot class?

```
interface Irobot2 { //code }
interface IrobotB { //code }
class Robot1 { //code }
class RobotA { //code }
class DerivedRobot { //code }
```

class Robot1 : RobotA { //code } class DerivedRobot : RobotA, Irobot2, IrobotB { //code }

class DerivedRobot : Robot1, RobotA, Irobot2, IrobotB { //code }

class Robot1 : Irobot2 { //code } class RobotA : IrobotB { //code } class DerivedRobot : Robot1, RobotA { //code }

class Robot1 : IrobotB, RobotA { //code }

43

Which is the base exception class that can catch all types of exceptions?

Exception

BaseException

GenericException

ExceptionBase

44 What is the output after executing the code below which attempts to divide by zero?

```
int i = 1;
int x = 0;
try {
    int divideByZeroError = i / x;
}
catch (NullReferenceException ex) {
    Console.WriteLine("Caught a null error");
}
catch (ArithmeticException ex) {
    Console.WriteLine("Caught a math error");
}
catch (DivideByZeroException ex) {
    Console.WriteLine("Caught a division error");
}
```

Caught a math error

Caught a division error

Caught a null error

None, the program terminates.

45 Like the default clause in a Switch statement executes for expressions without a case, will the finally clause catch the uncaught error in a try-catch statement?

No.

Yes.

Only if specified with the base Exception class.

46 Which key word is used to add a base class library or namespace to a project to become accessible?

using

import

include

append

47 How do would decorate a class definition to make it nonconcrete?

Abstract

Virtual

Override

Sealed

48 Is possible to prevent a class from being inherited?

Yes, make it sealed.

Yes, make it nonconcrete.

Yes, make it private.

No.

49 Of the following components, which cannot be inside a class definition?

namespace

method

field

property

50 Which operator is used in order to increment a number by 1?

++

--

&&

+

51 The modulus '%' returns the remainder of two int values when divided.

TRUE

FALSE

52 You can use access modifiers in an interface

TRUE

FALSE

53 Downcasting is implicit

TRUE

FALSE

54 What are Assemblies?

Packages containing MSIL instructions and metadata to allow various components and tools to function together within the CLR at runtime

A virtual environment that sits on top of an OS to convert the MSIL code into executable machine code at runtime.

Commonly used functionality shared by all languages and .NET programs

Supervises resource usage and automatically allocates and releases memory requirements

55 What do you use as a flag or marker indicating a place to pause current execution of a program?

Breakpoint

Step Into

Explanation : Step Into is used after a breakpoint is set

Debug Mode

Build

56 A class can have no constructors.

TRUE

Explanation : Every class contains a default constructor.

FALSE

57 Which keyword is used to call a method from the Parent class?

base**this**

Explanation : this keyword is used to call a class member from the Child class

virtual

Explanation : virtual keyword is used to specify a method that can be overridden in a derived class

override

Explanation : override keyword is used to override a method from the base class

58 What will you use in order to mimic multiple inheritance?

Abstract Class

Explanation : You can only inherit from one abstract class

Interfaces**Virtual Classes**

Explanation : The virtual keyword is used on methods and properties

override

Explanation : override keyword is used to override a method from the base class

59 You can only have one constructor.

TRUE**FALSE**

60 Properties are used to store private backing fields

TRUE

FALSE

61 C# projects Main method

In C#, which project templates involve a Main method?

console app

class library

xUnit test project

62 C# field initialization

In C#, constructors have to initialize every field.

False

True

63 .NET garbage collector

The garbage collector allocates a _____ to store and manage objects.

Stack trace

CTS

Managed Heap

Large Object

64 .NET VES

In .NET, the VES is the execution environment for _____ code.

reference-type

Windows-specific

managed

unmanaged

65 .NET code execution

Which component manages code execution?

Common Language Runtime

.NET Framework

Common Language Specification

Base Class Library

.NET implementations

66

Which are .NET implementations following the CLI?

Mono

CoreFx

.NET Core

.NET Standard

.NET Framework