1. Which of the following is the default access specifier of a class member variable?
- **Private**
- Public
- Protected
- Internal

2. Which of the following is the correct about interfaces in C#?
- Interfaces are declared using the interface keyword
- Interface methods are public by default.
- **Both of the above**
- None of the above

3. What is the primary benefit of inheritance in C#?
- It restricts a subclass from adding new members.
- It allows a class to inherit from multiple base classes.
- It forces all subclasses to redefine all methods of the base class.
- **It allows a class to inherit the properties and methods of a base class and extend its functionality.**

4. Can one interface inherit from one or multiple interfaces in C#?
- **Yes**
- No

5. A derived class cannot access the -------------------- members of its base class
- Public
- **Private**
- Protected
- None of the above

6. What will be the output of the following program?

```
class Person
{
    public void Introduction(){
        Console.WriteLine("I am a person.");
    }

    public string Introduction(){
        return "I am a person.";
    }
}
```

- Program will compile and run successfully.
- Program will compile successfully but will throw an exception at runtime.
- **Program will give a compile-time error.**
- Program will give a compile-time warning but will run successfully.

7. When you declare an array as int[] temperature = {0, 32, 50, 90, 212, 451};, the value of temperature.Length is .FileInfo
- 5
- **6**
- 7
- unknown

8. Which namespace is fundamental for basic C# operations?
- using CSharp;
- using System.Collections;
- **using System;**
- using Base;

9. What does the static keyword mean in C#?
- The variable can change
- The method can be overridden
- **The member belongs to the type rather than any specific instance**
- The value can be assigned only once

10. Which keyword is used to inherit from a base class in C#?
- extends
- inherits
- implement
- **:**

11. . Which collection in C# does NOT allow duplicate elements?
- List
- Array
- **HashSet**
- None of the above

12. What does the finally block in exception handling do?
- Catches exceptions
- Throws exceptions
- **Executes regardless of whether an exception is thrown or caught**
- Stops exceptions from propagating

13. Which of the following methods can be overridden in a derived class?
- Static method
- <mark>Virtual method</mark>
- Sealed method
- Private method

14. Which of the following provides a way to have multiple implementations for a method?
- <mark>Overloading</mark>
- Overriding
- Hiding
- Abstracting

15. What is the purpose of the virtual method in a base class?
- To hide methods and data from the derived class
- To prevent overriding in a derived class
- To overload methods in a derived class
- <mark>To allow overriding in a derived class</mark>

16. If a class inheriting an abstract class does not define all of its functions then it is known as?
- <mark>Abstract Class</mark>
- Child Class
- Static Class
- None of the above.

17. What will be the output of the following C# code?

- 20, 20
- 10, 10
- <mark>20, 10</mark>
- Exception

```csharp
namespace MyApplication {
  public class Class1 {
    public static int x = 10;

  }
  public class Class2: Class1 {
    public static int x = 20;
    static void Main(string[] args) {
      Console.WriteLine(x + ", " + Class1.x);
    }
  }
}
```

- **Static Members:** Both `Class1` and `Class2` have a `static` member variable named `x`. Static members belong to the class itself, not to specific instances of the class.

- **Inheritance and Hiding:** `Class2` inherits from `Class1`, but it also declares its own `static` variable `x`. This "hides" the `x` variable from `Class1`.

- **Accessing Static Members:**

  - `x` : Inside the `Main` method of `Class2`, `x` refers to `Class2.x`, which has the value 20.

  - `Class1.x` : This explicitly accesses the `x` variable of the `Class1` class, which has the value 10.

Therefore, the `Console.WriteLine` statement prints the value of `Class2.x` (20) followed by a comma and the value of `Class1.x` (10).

18. What will be the output of the following C# code?

- Error
- True True
- True False
- True 1

```
class Program {
  static void Main(string[] args) {
    String s1 = "Hello";
    String s2 = "IncludeHelp";
    String s3 = s1;
    Console.WriteLine(s1.Equals(s3) + "  " + s2.CompareTo(s1));
  }
}
```

19. What will be the output of the following C# code?

- 10
- 11
- 12
- Error

```
using System;

class Program {
  public static void Main() {
    int i = 10;
    Console.WriteLine(i++);
  }
}
```

The statement i++ is a post-increment operation, and it increases the value of i after evaluating the Console.WriteLine() statement. Thus, 10 will be printed.

20. If you define an array to contain seven elements, then the highest array subscript you can use is .

- 5
- 6
- 7
- 8