

Total Marks: 20\*1 = 20

Duration: 30 minutes

1. You want to call a generic method which accepts an argument of type T and returns Boolean. Which of the built-in generic delegate will you use? [choose whichever options you find correct]

- a. Action<T>
- b. Func<T,bool>
- c. Predicate<T>
- d. None of them

2. What is the output of the following code?

```
static void Main()
{
    var person = new {FirstName="Anil", LastName="Gupta";
    person.FirstName="Sunil";
    Console.WriteLine($"{person.FirstName} {person.LastName}");
}
```

- a. Anil Gupta
- b. Sunil Gupta
- c. Compilation Error
- d. None of them

3. Which of the following code will throw error?

- a. var arr = new [] {1, 2, 3, 4};
- b. var arr=new [] {"bangalore","chennai"};
- c. var arr = new [] {1, "Bangalore", 'a'};
- d. None of them

4. Go through the following code

```
class A
{
    protected static int x;

    public static int X
    {
        set {x=value;}

        get {return x;}
    }
}

class B : A
{
    public void Show()
    {
        Console.WriteLine("X: "+x);
    }
}

class Program
{
    static void Main( )
    {
        B.X = 10;
        Console.WriteLine(A.X);
    }
}
```

State which of this statement is correct?

- a. The output of the program will be 10
- b. The program will generate an compiler error
- c. The output of the program will be 0
- d. Though B.X=10 is possible but no value can retrieved by A.X and program will throw a runtime error

5. Match the following:

Extension	Description
1. .cs	A. Organizes projects, project items, and solution items in the solution
2. .sln	B. Represents forms, user controls, classes and module files that belong to a project.
3. .csproj	C. Represent the class file.

Which of the following combination is correct?

- a. 1-C, 2-A, 3-B
- b. 1-A, 2-B, 3-C
- c. 1-B, 2-C, 3-A
- d. 1-B, 2-A, 3-C

6. Go through the following code

```
class A
{
    public virtual void foo()
    {
        Console.WriteLine("A class foo...");
    }
}

class B : A
{
    public virtual void foo()
    {
        base.foo();
        Console.WriteLine("B class foo");
    }
}

class C : B
{
    public override void foo()
    {
        base.foo();
        Console.WriteLine("C class foo");
    }
}

class Program
{
    static void Main( )
    {
        B ob = new C();
        ob.foo();
    }
}
```

State which of the following output will be correct

- a. output will be:

A class foo

B class foo

C class foo

b. output will be:

B class foo

c. output will be :

C class foo

7. Go through the following code

```
interface IA
{
    void foo();
    void foo1();
}

interface IB
{
    void foo();
    void foo2();
}

class MyClass:IA,IB
{
    public void foo()
    {
        Console.WriteLine("foo method");
    }

    public void IA.foo1()
    {
        Console.WriteLine("foo1 method");
    }

    public void IB.foo2()
    {
        Console.WriteLine("foo2 method");
    }
}

class Program
{
    static void Main(string[] args)
    {
        MyClass ob = new MyClass();
        ob.foo();
    }
}
```

Which of the following statements is correct?

- The program runs without any error
- Program generates an error because you can't use 'public' keyword in the line 'public void IA.foo1()' and 'public void IB.foo2()'
- Program generates an error because you can't implement two interfaces in a class
- Program generates an error because you can't create an object of 'MyClass', because it has two explicitly defined functions of two different interfaces

8. Find out the correct array declarations

- int [ , ] myarray=new int [ , ] {(1,2), (3,4)};
- int [ , ] myarray={(1,2), (3,4)};

3. myarray={{(1,2), (3,4)}};
- 1,2,3
  - 1,2
  - 2,3
9. Find out that whether the following inheritance is possible or not.
- ```
internal class mybase
{
    //class members
}

public class myclass: mybase
{
    //class members
}
```
- Possible
  - Not Possible
10. State which of these following statements is correct.
- All the interface members are by default private
  - All the interface members are by default public
  - All the interface members, when implemented in class, have to be declared with override keyword
11. Go through the following code

```
class A
{
    public void Show()
    {
        Console.WriteLine("A class Show method...");
    }
}

class B:A
{
    public void Show()
    {
        Console.WriteLine("B class Show method...");
    }
}

class Program
{
    Static void Main()
    {
        A obj=new A();
        B obj1=new B();
        obj=obj1;
        obj1.Show();
        obj.Show();
    }
}
```

Which one of the following is correct answer?

- The program shows an error

- b. The output is "A class Show method" and "B class Show method"
  - c. The output is "B class Show method" and "A class Show method"
  - d. The output is "A class Show method" and "A class Show method"
12. Which of the following statements is correct?
- a. Structure is reference type
  - b. Structures are by default supplied with default constructor
  - c. I can write default constructor in the structure
  - d. Structure can have overloaded constructor as long as the constructor assigns values to all the variables declared in the structure
13. Go through the following code...
- ```
ushort dest;
char source = 'b';
dest = source;
Console.WriteLine(dest);
```
- a. This is implicit data type conversion
  - b. This is explicit data type conversion
14. Go through following code
- ```
int y = 10;
int x = ++y;
```
- a. Value of x is 10
  - b. Value of x is 11
  - c. Value of x is 9
15. Reference type variables are stored in \_\_\_\_\_.
- a. Stack
  - b. Heap
  - c. Code Region
16. How many mistakes are there in the following code?
- ```
interface IA
{
    static int x ;
    public void func();
}
```
- a. 1
  - b. 2
  - c. 3
17. if you want to access the keys and values stored inside the Dictionary<Tkey,Tvalue> generic class, then which of the following classes should be used to represent the key-value pair present inside the Dictionary<Tkey,Tvalue>?
- a. DictionaryEntry
  - b. Object
  - c. IList<Tkey,Tavlue>
  - d. KeyValuePair<Tkey,Tvalue>

18. Which of the following code segment is correct?

- a.
- ```
try
{
    int x=0; int y=0; int z=x/y;
}
catch(Exception ex) { //code }
catch(DivideByZeroException ex) { //code}
```
- b.
- ```
try
{
    int x=0; int y=0; int z=x/y;
}
catch(DivideByZeroException ex) { //code }
catch(Exception ex) { //code}
```
- c.
- ```
try
{
    int x=0; int y=0; int z=x/y;
}
finally
{
    catch(Exception ex) { //code }
    catch(DivideByZeroException ex) { //code}
}
```

19. Go through the following code and select a correct option.

```
class Product
{
    public int Id { get; set; }
    public string Name { get; set; }
}
class Program
{
    static void Main(string[] args)
    {
        Product first = new Product{ Id=1, Name="Product1"};
        Product second = new Product{ Id=2, Name="Product2"};
        Product third = first;
        third.Name="Product3";

        HashSet<Product> products = new HashSet<Product>
        {
            first, second, third
        };
        foreach (Product p in products)
        {
            Console.WriteLine(p.Name);
        }
    }
}
```

- a. Output will be  
Product1  
  
Product2  
  
Product3

- b. Output will be  
Product1  
  
Product2
- c. Output will be  
Product2  
  
Product3
- d. Output will be  
Product3  
  
Product2

20. Go through the following code and select the best answer from the options mentioned below.

```
class A
{
    public static void foo( params double[] arr, string str)
    {
        // code
    }
    public static void Main()
    {
        A.foo(90,70,"Mithila");
    }
}
```

- a. The code runs without any error.
- b. The code might throw exception during run time but will not throw any compile time error.
- c. The code throws a compile time error since param array declaration should be the last one in the function argument list of foo() function.