

COURSE CODE: 12B1WCI734

MAX. MARKS: 25

COURSE NAME: C# and VB.Net

COURSE CREDITS: 3

MAX. TIME: 1.5 Hrs

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q.1 [CO-3,4]

1.1 What Will Be The Output:

```
using System;
public class Program
{
    public static void Main(string[] args)
    {
        int[] i = new int[0];
        Console.WriteLine(i[0]);
    }
}
```

- a) 0
- b) IndexOutOfRangeException
- c) Nothing is printed as array is empty
- d) 1

1.2. What Will Be The Output:

```
using System;
public class Program
{
    public static void Main(string[] args)
    {
        int[] arr = new int[2];
        arr[1] = 10;
        Object o = arr;
        int[] arr1 = (int[])o;
        arr1[1] = 100;
        Console.WriteLine(arr[1]);
        ((int[])o)[1] = 1000;
        Console.WriteLine(arr[1]);
    }
}
```

- a) 10
10
- b) 10
100
- c) 10
1000
- d) 100
1000

1.3. What Will Be The Output:

(0.5*10)

```
using System;
public class Program
{
    public static void Main(string[] args)
    {
        String a = "TechBeamers";
        String b = "TECHBEAMERS";
        int c;
        c = a.CompareTo(b);
        Console.WriteLine(c);
    }
}
```

- a) -1
- b) 1
- c) 0
- d) Error

1.4. Correct output for code is?

```
static void Main(string[] args)
{
    float a = 10.553f;
    long b = 12L;
    int c;
    c = Convert.ToInt32(a + b);
    Console.WriteLine(c);
}
```

- a) 23.453
- b) 22
- c) 23
- d) 22.453

1.5. The data members of a class by default are?

- a) protected, public
- b) private, public
- c) private
- d) public

1.6. The output of code is?

```
class test
{
    public void print()
    {
        Console.WriteLine("Csharp:");
    }
}
class Program
{
    static void Main(string[] args)
    {
        test t;
        t.print();
        Console.ReadLine();
    }
}
```

- a) Code runs successfully prints nothing
- b) Code runs and prints "Csharp"
- c) Syntax error as t is unassigned variable which is never used
- d) None of the mentioned

1.7. Choose the correct output:

```
enum days:int
{
    sunday = -3,
    monday,
    tuesday
}
Console.WriteLine((int)days.sunday);
Console.WriteLine((int)days.monday);
Console.WriteLine((int)days.tuesday);
```

- a) -3 0 1
- b) 0 1 2
- c) -3 -2 -1
- d) sunday monday tuesday

1.8. Which of these keywords is not a part of exception handling?

- a) try
- b) finally
- c) throw
- d) catch

1.9. Which among the given classes is present in System.Collection.Generic.namespace?

- a) Stack
- b) Tree
- c) Sorted Array
- d) All of the mentioned

1.10. Select the statement which should be added to the current set of code to get the output as 10 20 ?

```
class baseclass
{
    protected int a = 20;
}
class derived : baseclass
{
    int a = 10;
    public void math()
    {
        /* add code here */
    }
}
```

- a) Console.writeline(a + "" + this.a);
- b) Console.Writeline(mybase.a + "" + a);
- c) console.writeline(a + "" + base.a);
- d) console.writeline(base.a + "" + a);

Q.2 [CO 4, 5]

- (a) What are interfaces? How multiple inheritance is possible in C#? Illustrate the concept by a suitable C# code? (3)
- (b) What is the difference in using virtual, override and new keyword in C# during overriding? Illustrate the concepts suitable C# code. (3)
- (c) Write a program in C# to demonstrate struct initialization using both default and parameterized constructors. (4)

Expected Output:

Struct declares using default and parameterized constructors :

```
newStruct 1: m = 0, n = 0
newStruct 2: m = 25, n = 25
```

Q.3 [CO 4]

- (a) What is exception and exception handling in C# and discuss all predefined classes? (3)
- (b) What is the relation between ArithmeticException and Exception Classes? Can we have two catches having these exceptions in the same program; illustrate the concept with suitable code? (3)
- (c) Design the programs, ask the user to enter two numbers and find their quotient. Now divide the quotient with root of the first number. Use ArithmeticException and /or DividebyZeroException. (4)