

Date: 6-12-2022 (9am)

Registration number:

ST. JOSEPH’S COLLEGE (AUTONOMUS), BENGALURU-27

B.C. A - III SEMESTER

SEMESTER EXAMINATION: OCTOBER 2022

(Examination conducted in December 2022 )

**CA 3222 -:** C# And Dotnet Framework

Time- 2 ½ hrs Max Marks - 60

This question paper contains 5 printed pages and three parts

**Part A**

**I Answer all of the following (10\*1=10)**

1. Unboxing in .Net allows the user to convert
2. an integer type to double
3. a reference type to a value type
4. a value type to a reference type
5. a double type to integer
6. 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);

 }

1. 23.453
2. 22
3. 23
4. 22.453
5. What is encapsulation in OOP?
6. It is a way of combining various data members and member functions that operate on those data members into a single unit
7. It is a way of combining various data members and member functions into a single unit which can operate on any data
8. It is a way of combining various data members into a single unit
9. It is a way of combining various member functions into a single unit

4. Select the correct ‘if statement’ to be filled in the given set of code:

static void Main (string [] args)

{

     Int [] num = {50, 65, 56, 88, 43, 52};

     int even =0, odd =0;

     for (int i =0;i < num.Length;i++)

     {

          /\*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\*/

     }

     Console. WriteLine ("Even Numbers:"+even);

     Console. WriteLine ("Odd Numbers:"+odd);

     Console.ReadLine();

}

1. if ((num % 2) == 0)

{ even += 1;

}

else

{ odd += 1;

}

1. if ((num \* i) == 0)  
   { even += 1;  
   }  
   else  
   { odd += 1;  
   }
2. if (num[i] % 2 == 0)  
   { even += 1;  
   }  
   else  
   { odd += 1;  
   }
3. if (num[i] % 2 = 0)  
   { even += 1;  
   }  
   else  
   { odd += 1;  
   }
4. What will be the output for the given set of code?

{

    abstract class A

    {

        public int i;

        public abstract void display();

    }

    class B: A

    {

        public  int j;

        public int sum;

        public override void display()

        {

            sum = i + j;

            Console.WriteLine(+i + "\n" + +j);

            Console.WriteLine("sum is:" +sum);

        }

    }

    class Program

    {

        static void Main(string[] args)

        {

            A obj = new B();

            obj.i = 2;

            B obj1 = new B();

            obj1.j = 10;

            obj.display();

            Console.ReadLine();

        }

    }

}

1. 2, 10 12
2. 0, 10 10
3. 2, 0 2
4. 0, 0 0
5. \_\_\_\_\_\_\_\_\_\_\_ method cannot be overridden by the child class.
6. Sealed
7. Virtual
8. Public
9. Protected
10. Which of the following attribute must be set on a validator control for the validation?
11. ControlToValidate
12. Validate Control
13. ValidateToBind
14. Validate Bind
15. Which of the following statement is true?
    1. Exception occurs during compile time
    2. Exception occurs during runtime
    3. Exception occurs during design time
    4. All of the above
16. Which among the following is considered as .NET Exception class?  
    a) Exception  
    b) StackUnderflow Exception  
    c) File bound Exception  
    d) All of the mentioned

### Which of the following is true for ADO.NET Dataset?

1. Dataset provides a disconnected view of a data source.
2. Dataset enables to store data from multiple tables and multiple sources
3. We can create a relationship between the tables in a Dataset.
4. All of the above is true

**Part B**

**II. Answer any five of the following (5\*6=30)**

1. Explain the important characteristics of C# in detail.
2. Demonstrate the type of parameter passed to methods in C#.
3. Define an abstract class and discuss the role of abstract classes in an application development.
4. Explain constructors and its types with suitable example.
5. Demonstrate both sealed classes and sealed methods with example program.
6. Explain creating and using delegates with example.
7. Briefly explain connected and disconnected architecture of ADO.NET.

**Part C**

**III. Answer any two of the following (2\*10=20)**

18 a) Explain protected versus private member access mode (5 + 3+ 2)

b) Explain the following terms in brief

1. preventing inheritance
2. Hiding methods
3. Explain the following with suitable example (5+5)
4. Runtime Polymorphism
5. Compile time polymorphism

* + 1. **Why we need exception handling in C#? differentiate between Error and Exception in C#?** Explain about try-catch implementation with example.