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## Fifth Semester B.E. Degree Examination, Jan./Feb.2021 • Net Framework for Application Development

Time: 3 hrs.

Max. Marks: 80

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

### Module-1

- 1 a. Explain the general structure of C# program with an example. (06 Marks)
- b. How can C# compiler implicitly infer the type of a variable? Explain with suitable examples. (06 Marks)
- c. Explain expression bodied methods with a suitable example. (04 Marks)

**OR**

- 2 a. Consider the following code :  

```
public void DoWorkWithData(int intData, float, floatData, int moreData)
{
    // some codes
}

```

Suppose it has two more implementations as follows:  

```
public void DoWorkWithData (int intData)
{
    // some codes
}

```

and  

```
public void DoWorkWithData (int moreData)
{
    // some codes
}

```

This code will fail to compile since it fails to invoke correct overloaded version. How can this issue be solved? (08 Marks)
- b. Explain try, catch, finally and throw keywords with syntax and an example. (08 Marks)

### Module-2

- 3 a. How can you state a class, method and data to be static? Give suitable examples. (09 Marks)
- b. Explain various ways of copying array elements. (07 Marks)

**OR**

- 4 a. How does C# facilitate in modifying the original argument passed to a method, when the data it references changes within the method? (08 Marks)
- b. Explain the concept of boxing and unboxing. (04 Marks)
- c. Differentiate between class and structure. (04 Marks)

### Module-3

- 5 a. Write a C# program that has a class TwoDShape with fields dim1 and dim2 and a method area( ). Create a derived class Triangle and Rectangle that inherits TwoDShape. Override method area( ) to calculate area of Rectangle and Triangle. (08 Marks)
- b. Write a C# program having a method to calculate the sum of a variable number of int arguments passed to it and returning the result as an int. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

**OR**

- 6 a. How is multiple inheritance supported in C#? Explain with an example. (08 Marks)  
b. What is the need for garbage collector? How does it work? (08 Marks)

**Module-4**

- 7 a. Explain set and get access method with an example. (08 Marks)  
b. Define indexer with an example. Demonstrate with an example. (08 Marks)

**OR**

- 8 a. What is the use of generic classes? Write a C# program for swapping :  
(i) Two integers (ii) Two characters, using generic method. (08 Marks)  
b. Explain Stack<T> collection class with an example. (08 Marks)

**Module-5**

- 9 a. Define delegate. How is it declared? Explain with an example. (07 Marks)  
b. Write Language Integrated Query(LINQ) to select, filter and order data. (09 Marks)

**OR**

- 10 a. How does .NET facilitate to define and trap significant actions and arrange for a delegate to be called? (08 Marks)  
b. Write a C# program for overloading + operator. (08 Marks)

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