15CS564

# Fifth Semester B.E. Degree Examination, Dec.2023/Jan.2024 Of Net Framework for Application Development

Time: 3 hrs.

Max. Marks: 80

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

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- 1 a. Explain general structure of C# program with suitable example. (06 Marks)
  - b. Define exception. List any four built in classes to handle exception. (04 Marks)
  - c. Write a C# program to generate Fibonacci series upto 'n'. Read 'n' from console device.
    (06 Marks)

#### OR

- 2 a. List the different types of operators in C#. Explain any one type of operation in brief.
  - b. Define method. List and explain different method parameters. (05 Marks)
    (05 Marks)
  - c. Write a C# program to read two arguments as parameter and return four output values as addition, subtraction, product and division as output parameter from a method. (06 Marks)

## Module-2

- 3 a. Demonstrate Boxing and unboxing with code snippets. (06 Marks)
  - b. Discuss two different operators to cast data safely in C#. Give examples. (06 Marks)
    - c. Differentiate between class and structure. (04 Marks)

#### OR

- 4 a. What is a gagged array? Write a C# program to create a gagged array, populate this array with values and to display contents of the same. (06 Marks)
  - b. Demonstrate ref and out parameters with suitable examples for each. (10 Marks)

#### Module-3

- 5 a. Explain the concept of params array with programming example. (06 Marks)
  - b. Define Inheritance. Explain how to create a derived class that inherits features from a base class, with an example program. (06 Marks)
  - c. Explain Abstract class and Abstract method, with an example. (04 Marks)

#### OR

- 6 a. Explain how to manage system resources by using Garbage collector. (06 Marks)
  b. Explain how to implement interface in a class with programming example. (06 Marks)
  - c. Explain Sealed classes and Sealed methods in brief. (04 Marks)

### Module-4

- a. Define property. List and explain with example different types of properties.
   b. Compare Indexers and arrays with example.
   (06 Marks)
   (06 Marks)
  - c. Write an algorithm to insert an item into an ordered binary tree. (04 Marks)

OR

8 a. Explain the stack <J> collection class with example. (08 Marks)

b. List and explain different operators used to access and manipulate individual bits in 'int' (08 Marks)

Module-5

9 a. What is LINQ? With suitable example, explain ordering, grouping and aggregating data.

(10 Marks)

b. Explain overloading of increment and decrement operations in C#.

(06 Marks)

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10 a. Demonstrate defining an enumerator by using an iterator.

BANGALORE - 560 037 (08 Marks)

b. Explain the concept of declaring an event, subscribing to an event, unsubscribing from an event and raising an event in C#. (08 Marks)

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