



# CBGS SCHEME

17CS564

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

Time: 3 hrs.

Max. Marks: 100

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 suitable example. (06 Marks)
- b. With programming example, explain expression bodied methods and string interpolation in C#. (08 Marks)
- c. Write a C# program to check whether the number read from the user is a strong number or not. (Hint : A number is called strong number if sum of the factorial of its digits is equal to number itself). (06 Marks)

OR

- 2 a. Explain the concept of named arguments and optional parameters with programming example. (06 Marks)
- b. Define exception. Explain how exception handling is achieved in C#. (08 Marks)
- c. Write a C# program to find the roots of a quadratic equation by reading the coefficients from the user. (06 Marks)

### Module-2

- 3 a. Explain the concept of Boxing and Unboxing with an example. (06 Marks)
- b. Define class and structure. Give the difference between structure and class. (08 Marks)
- c. Illustrate the concept of static data, with C# program that counts the number of objects being created by a class. (06 Marks)

OR

- 4 a. Explain value type and reference type with an example. (06 Marks)
- b. Explain Anonymous classes, with an example. (06 Marks)
- c. Define Jagged Array. Explain with program how jagged arrays are declared, populated and computer the sum of all elements. (08 Marks)

### Module-3

- 5 a. Explain the concept of parameter arrays with programming example. (06 Marks)
- b. What is inheritance? What are the advantages and disadvantages of inheritance? Explain usage of base keyword in inheritance. (08 Marks)
- c. Explain how method overriding is achieved in C# with programming example. (06 Marks)

OR

- 6 a. Explain with example abstract and sealed keyword with respect to class and methods. (10 Marks)
- b. Explain the steps taken by the garbage collector to destroy objects. (05 Marks)
- c. Mention the difference between interface and class. (05 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.

**Module-4**

- 7 a. Define property with its syntax. List and explain with example different types of properties. (10 Marks)
- b. List and explain different operators used to access and manipulate individual bits in 'int' type. (05 Marks)
- c. Define generic. Write a C# program for swapping of 2 numbers using generic method. (05 Marks)

**OR**

- 8 a. Explain the Stack<T> and LinkedList<T> collection class with programming example. (12 Marks)
- b. Define indexer with its syntax. What are the uses of indexers? Demonstrate with an example. (08 Marks)

**Module-5**

- 9 a. Define Delegate. Explain how to declare delegate with an example. (10 Marks)
- b. Define event. Explain how to handle event by using a delegate with an example. (10 Marks)

**OR**

- 10 a. What is LINQ? Explain LINQ for selecting and ordering of data with an programming example. (10 Marks)
- b. Explain operator overloading and their constraints. Write the complete C# program that creates a class called 'COMPLEX' which simulates a complex number and overloads the operators '+', '-' and '\*' for COMPLEX objects. (10 Marks)

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