

# CBCS SCHEME

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17CS564

## Fifth Semester B.E. Degree Examination, June/July 2023 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. Define framework. Explain namespace with a suitable example. (06 Marks)
- b. Write a C# program to find largest of 3 numbers using && operator (read values from console). (06 Marks)
- c. Define exception. Explain try, catch, finally, throw with suitable code snippets or programming example. (08 Marks)

OR

- 2 a. Write a C# program to generate fibonacci series upto 'n'. Read 'n' from console. (06 Marks)
- b. Explain concept of optional and named arguments with code, snippets or examples. (06 Marks)
- c. Define a method. With syntax, explain in detail declaring a method returning data from a method, calling methods and method overloading. (08 Marks)

### Module-2

- 3 a. Demonstrate boxing of unloading with suitable code snippets. (06 Marks)
- b. Write a C# program to read 2 numbers, into a method called arithmetic-operation that performs all arithmetic operations ((+, -, \*, /, %(mod)). Demonstrate how you can make this method return multiple values to the called program/main program. (06 Marks)
- c. Explain purpose of encapsulation and define a class and control the accessibility of members in a class. Illustrate with suitable example. (08 Marks)

OR

- 4 a. Define a structure. Give its syntax and discuss the difference between a class and a structure. (06 Marks)
- b. Explain the concept of static in C#. Write a C# program to find number of objects created. (06 Marks)
- c. Write a method that can accept any number of arguments of any type by using the param keyword. (08 Marks)

### Module-3

- 5 a. What is inheritance? With suitable code snippets, discuss method hiding and overriding using new, virtual and override keywords. (06 Marks)
- b. Explain abstract class and abstract method with suitable example. (06 Marks)
- c. Explain how 'Using' statement provides a clean mechanism for controlling the lifetimes of resources. (08 Marks)

OR

- 6 a. Define a destructor with syntax. Explain how does the garbage collector works. (06 Marks)
- b. Explain with syntax defining and implementing an interface and explicitly defining an interface. (06 Marks)
- c. Demonstrate with suitable program sealed class and sealed methods. (08 Marks)

**Module-4**

- 7 a. Demonstrate initializing objects by using properties with a suitable example. (06 Marks)  
b. Explain binary tree algorithm with an example. (06 Marks)  
c. With suitable example, explain Lists<T> collection class. (08 Marks)

**OR**

- 8 a. What is Lamda expression? Explain with suitable examples. (06 Marks)  
b. Explain the use of get and set accessories with examples. (06 Marks)  
c. What is an indexer? List and explain set of operators provided by C# that you can use to access and manipulate the individual bits in an int. (08 Marks)

**Module-5**

- 9 a. Define an event. Explain with syntax and code snippets declaring, subscribing to an event unsubscribing from an event and raising an event. (10 Marks)  
b. Explain delegate. How it is declared? Give with an example. (10 Marks)

**OR**

- 10 a. Write a C# program to demonstrate overloading increment and decrement operators. (10 Marks)  
b. What is LINQ? With suitable example, explain selecting, ordering, grouping and aggregating data using LINQ. (10 Marks)

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