

USN

--	--	--	--	--	--	--	--	--	--

17CS564

Fifth Semester B.E. Degree Examination, July/August 2022 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. Every programmer has to abide to the rules of a particular programming language. With this, explain the identifier naming rules and recommendations in C# language. (06 Marks)
- b. Justify the need for namespaces within a programming environment. Explain with an example. (06 Marks)
- c. Build a C# program to check whether the given number is 'strong number or not'. (Note: strong number is a special number whose sum of factorial of each digit is equal to the original number) (08 Marks)

OR

- 2 a. Discuss the optional and named parameters passing in C#. (06 Marks)
- b. Define a method by name "DIVIDE" that would divide two integers. Incorporate customized exception handling mechanism to handle "DivideByZero Exception" situation. Develop a C# program that employs this method to divide a user-defined values. (08 Marks)
- c. Explain checked and unchecked statements in C#. (06 Marks)

Module-2

- 3 a. We can share the data across the function calls. Justify this statement by using static data and static methods available in C#. (06 Marks)
- b. Develop a C# program which accepts two values from user, passed as reference parameters to a method "CALCULATE" and the method inturn returns four output values as add, sub, mul and division operations on arguments. (10 Marks)
- c. Explain Boxing and Unboxing with an example. (04 Marks)

OR

- 4 a. Explain enumeration in C# with an example. (04 Marks)
- b. Differentiate value types and reference types. (06 Marks)
- c. Apply the knowledge of arrays used in C# and explain the various ways of copying an individual item from array1 to array2. (10 Marks)

Module-3

- 5 a. Build a C# program to calculate the sum of variable number of integer values using "params". (08 Marks)
- b. Explain the usage of 'new' keyword with respect to member/method hiding feature available in C#. (04 Marks)
- c. Develop a C# program to show the polymorphic behaviour for the following Fig.Q5(c).

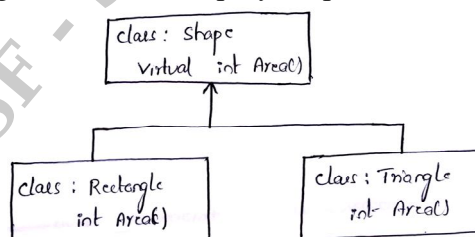


Fig.Q5(c)

(08 Marks)



17CS564

OR

- 6 a. Define an interface. List the restrictions of declaring an interface in C#. (08 Marks)
- b. The C# language relieves the programmer from manual resource management. How do you achieve this in C#? Justify your answer with an example. (08 Marks)
- c. Apply the knowledge of inheritance and explain the usage of 'sealed' keyword in C#. (04 Marks)

Module-4

- 7 a. How would you enforce encapsulation using read and write properties in C#? Explain in detail. (10 Marks)
- b. Define an Indexer. List and explain set of operators provided by C# which can be used to access and manipulate the individual bits in an integer value. (10 Marks)

OR

- 8 a. Build a C# program to implement stack <T> collection class. (10 Marks)
- b. Develop a C# program to construct a binary tree using generics. (10 Marks)

Module-5

- 9 a. What is the advantage of implementing IEnumerable interface over enumerating an elements in a collection? Explain with an example. (10 Marks)
- b. What are events in C#? Explain with an example. (10 Marks)

OR

- 10 a. Explain Language-Integrated Query (LINQ) to select, order and aggregate data of enumerable collections. (10 Marks)
- b. Write a C# program to do the following in complex numbers C1 and C2 using operator overloading.
C1 + C2, C1 - C2, C1 == C2 (10 Marks)
