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CBCS SCHEME

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15CS564

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020
.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. Define exception. With syntax and code snippets, explain try, catch, throw and finally used in exception handling. **(09 Marks)**

b. Explain with code snippets optimal parameters and named arguments. **(07 Marks)**

OR

2 a. Differentiate between break and continue statements with code snippets. **(02 Marks)**

b. With example, explain checked and unchecked statements and expressions. **(06 Marks)**

c. Write a C# program to perform the following: Read marks obtained for 3 subjects, calculate average and display grade according to the following cases. Use switch statement.

$70 \leq avg \leq 80 \rightarrow$ "outstanding"

$60 < avg \leq 69 \rightarrow$ "First class"

$50 < avg \leq 59 \rightarrow$ "Second class"

$40 < avg \leq 49 \rightarrow$ "Average class"

Otherwise $\rightarrow$ "Fail class" **(08 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. Write a C# program to design a method to calculate sum and average of 'n' numbers using params array. **(08 Marks)**

b. What is garbage collection? Why it is needed? Explain the steps taken by garbage collector to destroy objects. **(08 Marks)**

OR

6 a. Explain inheritance with examples. How it is used in class? What are the advantages of using inheritance? **(06 Marks)**

b. Define and explain abstract class and scaled class. **(04 Marks)**

c. What is an interface? How it is defined in C#? Demonstrate with examples how to implement interfaces in class. **(06 Marks)**

Module-4

7 a. Explain two types of properties in C# with syntax and example for each. **(06 Marks)**

b. Define indexer with syntax. **(02 Marks)**

c. Write a C# program to create, manipulate and iterate through the contents of List Collection class. Show Add, Remove, RemoveAt and Insert methods. Give necessary comments for each method. **(08 Marks)**

OR

8 a. Write a C# program to demonstrate a generic solution for swapping of 2 integers and swapping of 2 strings. **(08 Marks)**

b. Differentiate between Dictionary < Tkey, Tvalues > collection class and sorted list < Tkey, Tvalues > collection class. **(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)**

OR

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