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06CS/IS761

Seventh Semester B.E. Degree Examination, Dec.09/Jan.10
C # Programming and .Net

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions, selecting at least TWO questions from each part.***

PART – A

1 a. Explain with a neat diagram, the relationship between .Net runtime layer and the base class library. **(08 Marks)**

b. What is the role of .Net type meta data? Give example. **(04 Marks)**

c. List and explain intrinsic CTS data types and .Net name spaces in C #. **(08 Marks)**

2 a. What is meant by command line debugger? Write source code in C# to compute the square root of a number passed as a command line argument. **(07 Marks)**

b. How would you create object instance in C #? With examples, describe default assignment of .Net data types. **(08 Marks)**

c. How do you format .Net string and textual output? Give examples. **(05 Marks)**

3 a. Distinguish between value types and reference types, with an examples. **(07 Marks)**

b. What is the role of master node, system object? **(03 Marks)**

c. Explain the following terms, with an example, with reference to C #.
i) foreach ii) ref iii) params iv) verbatim v) enum. **(10 Marks)**

4 a. What is boxing and unboxing? Explain with an examples. **(08 Marks)**

b. How would you enforce encapsulation using accessors and mutators? Explain with examples, class properties and static properties in C #. **(08 Marks)**

c. Illustrate with an example, polymorphic support in C #. **(04 Marks)**

PART – B

5 a. List and explain core members of the system exception type. How would you build custom exception? **(06 Marks)**

b. Write C # application to illustrate handling multiple exceptions. **(06 Marks)**

c. What is meant by object life time? Describe the role of .Net garbage collection, finalization process and Ad Hoc destruction method, with examples. **(08 Marks)**

6 a. Which is the alternate approach to support multiple inheritance? List its major features. **(05 Marks)**

b. Briefly explain, with an example, explicit interface implementation. **(05 Marks)**

c. Write a program in C # to accept two strings and perform the following operations :
i) copy string 2 to string 3
ii) check string 1 ends with "ENGG" or not. If it is true, search character 'a' in string 3.
iii) insert "VTU" in string 2 at position 6 and display it. **(10 Marks)**

7 a. With an example, discuss advanced keywords of C # : checked, unchecked, un safe stackalloc, volatile and size of. **(12 Marks)**

b. Write a program in C # to sort and reverse an array of five elements using sort( ) and reverse ( ) methods. **(04 Marks)**

c. What do you understand by events and delegates in C #? Give example. **(04 Marks)**

8 a. With a neat diagram, explain physical view and logical view of .Net assemblies. **(06 Marks)**

b. Illustrate with an example, differences between synchronous and asynchronous delegates. **(06 Marks)**

c List the key elements and core CIL tokens of the assembly manifest. **(04 Marks)**

d. Write short notes on process of building a multifile assembly. **(04 Marks)**

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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.