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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