10CS/IS761

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024
C# Programming and •NET

Time: 3 hrs.   Max. Marks:100

Note: *Answer FIVE full questions, selecting atleast TWO questions from each part.*

PART – A

1   a. Discuss the building blocks of •NET framework with a neat diagram. **(10 Marks)**
    b. Explain the common language runtime in detail. Illustrate the workflow that takes place between the source code, give •NET complier and •NET execution engine. **(10 Marks)**

2   a. Explain the following with respect to C# application :
       i)   Referencing external assemblies
       ii) Compiling multiple source files
       iii) Response files
       iv) Command line Debugger. **(12 Marks)**
    b. Explain any three C# preprocessor directives. **(08 Marks)**

3   a. Explain the core members of System.Object class. **(06 Marks)**
    b. Discuss the method parameter modifiers with an example for each. **(10 Marks)**
    c. What is Boxing and Unboxing? Give examples for each. **(04 Marks)**

4   a. What is encapsulation? Explain the two ways of enforcing encapsulation with examples each. **(09 Marks)**
    b. Explain the containment/Delegation model with an example. **(06 Marks)**
    c. Explain two different roles of this keyword with an example. **(05 Marks)**

PART – B

5   a. Explain the finalization process in •NET environment. **(04 Marks)**
    b. Explain the members of system. GC type with an example. **(06 Marks)**
    c. Develop a C# program to create user defined exception to handle divide by zero error. **(10 Marks)**

6   a. Explain three different ways of obtaining interface references with neat examples. **(10 Marks)**
    b. Explain how do you build cloneable objects in C# with example. **(10 Marks)**

7   a. What are delegates? Explain the concept of multicast delegate with example. **(10 Marks)**
    b. Discuss the following advanced key words in C#.
       i) Checked   ii) Unchecked   iii) Stackalloc iv) Fixed. **(10 Marks)**

8   a. Explain the two conceptual views of •NET assembly, with a neat diagram. What are its benefits? **(10 Marks)**
    b. Write short notes on :
       i) Cross language inheritance
       ii) Shared assembly. **(10 Marks)**

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