

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

Seventh Semester B.E. Degree Examination, Aug./Sept.2020
C# Programming and .NET

Time: 3 hrs.

Max. Marks:100

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

PART – A

1.
 - a. What are the building blocks of .NET platform? Give the relationship between .NET runtime layer and the base class library. (08 Marks)
 - b. What is an assembly? Explain each component of an assembly. Differentiate between single file and multifile assembly. (08 Marks)
 - c. Write a note on .NET namespaces. (04 Marks)
2.
 - a. Explain the C# preprocessor directives giving any three examples. (08 Marks)
 - b. What is CSC.rsp file? Where is it located? (04 Marks)
 - c. Write a C# program to illustrate the use of an array for sorting a list of numbers. (08 Marks)
3.
 - a. Why System.Object is called master node? List and explain any three instance methods and static methods of System.Object. (10 Marks)
 - b. Explain the following types with an example, with reference to C#
 - i) foreach/in ii) ref iii) params iv) verbatim v) enum (10 Marks)
4.
 - a. What is Encapsulation? Discuss the enforcing encapsulation methods, with suitable examples. (10 Marks)
 - b. Explain the following concepts with reference to inheritance,
 - i) Sealed classes
 - ii) Programming for containment/delegation
 - iii) Nested type definitions. (10 Marks)

PART – B

5.
 - a. What are bugs, errors and exception? List and explain the core members of System.Exception type with a program example. (08 Marks)
 - b. Describe the role of .NET garbage collection, finalization process and Ad-Hoc destruction method with examples. (08 Marks)
 - c. Write C# application to illustrate the concept of Handling multiple exceptions. (04 Marks)
6.
 - a. What is an interface? Explain the three methods to obtain interface references with example. (10 Marks)
 - b. With a program example, explain the following classes of System.Collections:
 - i) ArrayList ii) Queue iii) Stack. (10 Marks)
7.
 - a. List and explain the members of System.MulticastDelegate/System.Delegate. (06 Marks)
 - b. Write a note on understanding asynchronous delegates. (04 Marks)
 - c. Discuss the advanced keywords of C#,
 - i) unchecked ii) unsafe iii) stackalloc iv) sizeof v) volatile. (10 Marks)
8.
 - a. Design a C# application for linked list with following operation:
 - i) Add car
 - ii) Remove car
 - iii) Count the number of cars
 - iv) Cars present. (10 Marks)
 - b. Describe in detail, cross Language Inheritance and Understanding shared Assemblies. (10 Marks)

