Sub. Code : | 3 | 6 | 1 | 8 |

Exam. Code : | 0 | 4 | 6 | 1 |

M.Sc. Information Technology 3rd Semester

1128

.NET FRAMEWORK AND C#

Paper : MS-32

Time Allowed : Three Hours]   **[Maximum Marks : 80**

Note :— Attempt **five** questions in all, including Q. **1** in Section-A, which is compulsory and taking **one** each from Section-B to Section-E. Marks are indicated on the right of various questions.

SECTION—A

(Compulsory Question)

1. (a) Give two major differences between C++ and C#.

    (b) Explain Common Intermediate Language (CIL), formerly called Microsoft Intermediate Language (MSIL) with an example.

    (c) Explain the use of static and read-only variables in C#.

    (d) What are the main advantages of C# events ?

    (e) Define an interface in C#.

    (f) What is the code behind ASP.NET ?

    (g) Name any one technique of deployment of ASP.NET web application.

    (h) What is DataList control ?   8×2=16

SECTION—B

2. (a) What are the building blocks of Microsoft's .NET framework ? Give the relationship between .NET runtime layer and the base library.

   (b) Explain the role and responsibilities of Common Language Runtime (CLR) with a diagram describing the modules of CLR. 8,8

3. (a) Discuss the difference between value type and reference type. Why are Boxing and unboxing an essential concept in C#'s type system. Explain by taking C# examples.

   (b) Name and explain various types of looping constructs supported by C# by giving appropriate examples. 8,8

SECTION—C

4. (a) What are delegates in C# ? Differentiate between synchronous and asynchronous delegates, with an example.

   (b) What is an exception ? Write a C# program that will read a name from the keyboard and display it on the screen. The program should throw an exception when the length of name is more than 15 characters. Design your own exception. 8,8

5. (a) What is object serialization ? Provide an overview of various techniques for serializing objects. Explain by taking C#.NET programs.

   (b) What is System.IO namespace ? Explain the following non-abstract classes in the System.IO namespace : FileStream, File. 8,8

SECTION—D

6. (a) List down various windows form controls. Explain any three controls by C#.NET examples.

   (b) Discuss Click Once deployment technique to deploy windows form application with an example.   8,8

7. (a) What is view state in ASP.NET ? How is it different from Session State ? Explain View State techniques in ASP.NET.

   (b) Explain the practical importance of data validation in web development. What are various controls for data validation in ASP.NET ? Explain by means of relevant examples.

                                                                                      8,8

SECTION—E

8. Draw and explain ADO.NET architecture with its salient features. What is Connection oriented and Connectionless data access with ADO.NET ?   16

9. What do you mean by managed data provider ? What are its functions ? How managed data providers are supported in ADO.NET ?   16