

(i) Printed Pages : 4]

Roll No. ....

(ii) Questions : 9]

Sub. Code : 

3	6	1	8
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Exam. Code : 

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**M.Sc. Information Technology 3rd Semester  
Examination**

**1127**

**.NET FRAMEWORK AND C#**

**Paper : MS-32**

**Time : 3 Hours]**

**[Max. Marks : 80**

*Note :-* Attempt *five* questions in all, including Question No. 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)**

**8×2=16**

1. (a) How does the Common Language Runtime make programming in C# different from programming in a traditional language like C++ ?

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( 1 )

Turn Over

- (b) What is C# Enumeration ? Explain with the help of examples.
- (c) What are classes, objects, methods and instance variables in C# ?
- (d) C# .NET uses a “Just-In-Time” compiler.” What is that ?
- (e) In ASP.NET, what is postback ?
- (f) Which property allows ASP.NET controls to maintain their values when a page is posted to itself ?
- (g) What is the difference between a Typed and an Un-typed DataSet ?
- (h) What do you mean by .NET Namespaces ?

### **Section-B**

- 2. Draw a neat and clean diagram for .NET Framework architecture. Which component of .NET architecture produces metadata for portable executables ? Explain other features of this component.
- 3. (a) Explain the difference between the features of Java and C#.

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- (b) Name and explain various data types supported by C#. What are the memory requirements of these data types ? 8,8

### Section-C

4. (a) What is the difference between SOAP and XML ? Give examples.
- (b) What are I/O streams in C# ? Write a C# program to duplicate the contents of a sequential file. 8,8
5. (a) What are exceptions in C# and how are they handled ? When do you use exception handling in a program ? Explain the use of try, throw, catch and finally in C#.
- (b) How does polymorphism make systems extensible and maintainable ? Explain with C# code example. 8,8

### Section-D

6. (a) What is a window programming ? How is it different from traditional programming ? Explain the role of window forms, menus and dialog controls in development of windows application.

(b) What are various components and controls for Windows Forms ? 8,8

7. (a) Briefly describe what is meant by, respectively, multiple document interfaces, single document interfaces, and tabbed document interfaces ? Briefly list the advantages and the disadvantages of multiple document interfaces.

(b) Develop an ASP.NET web application that creates a database of students having the following attributes : Roll #, Name, E-mail ID, and Age. Make sure to validate the data. 8,8

### **Section-E**

8. What are data providers in the context of ADO.NET ? Identify data to a Data Grid/Grid view and briefly describe the four key classes of each provider. Identify the data providers that ship with ASP.NET. 16
9. What is ADO.NET object ? State its properties. Explain how you can establish connection with database and execute the SQL statements, by taking a suitable example. 16