

## M4.1-R4: APPLICATION OF .NET TECHNOLOGY

### NOTE:

1. There are **TWO PARTS** in this Module/Paper. **PART ONE** contains **FOUR** questions and **PART TWO** contains **FIVE** questions.
2. **PART ONE** is to be answered in the **TEAR-OFF ANSWER SHEET** only, attached to the question paper, as per the instructions contained therein. **PART ONE** is **NOT** to be answered in the answer book.
3. Maximum time allotted for **PART ONE** is **ONE HOUR**. Answer book for **PART TWO** will be supplied at the table when the answer sheet for **PART ONE** is returned. However, candidates, who complete **PART ONE** earlier than one hour, can collect the answer book for **PART TWO** immediately after handing over the answer sheet for **PART ONE**.

**TOTAL TIME: 3 HOURS**

**TOTAL MARKS: 100**  
**(PART ONE – 40; PART TWO – 60)**

### **PART ONE** **(Answer all the questions)**

1. **Each question below gives a multiple choice of answers. Choose the most appropriate one and enter in the “tear-off” answer sheet attached to the question paper, following instructions therein. (1x10)**
  - 1.1 The .NET technology platform is based on two core technologies
    - A) .NET product and .NET platform.
    - B) XML and the suite of Internet Protocols.
    - C) .NET Framework and the .NET Enterprise server.
    - D) C# and VB.NET languages.
  - 1.2 Custom Validator is used to
    - A) display all the validation error message grouped together.
    - B) validate a control to check whether it is empty.
    - C) perform validation on a control by using user defined functions.
    - D) validate the layout of controls.
  - 1.3 DataColumnCollection class “Item” property
    - A) determines whether the collection of “DataColumn” objects is read only.
    - B) add or remove DataColumn objects.
    - C) stores the name of the DataColumn objects.
    - D) retrieves a specified DataColumn object from the collection of columns.
  - 1.4 In Windows Form Application, the Application.Run() method
    - A) is responsible for starting the standard application message loop.
    - B) controls the application’s starting and stopping process.
    - C) allows messages in the queue to be processed.
    - D) displays the “splash screen”.
  - 1.5 DataRowView.CurrentRows lists all the rows
    - A) that have been newly created.
    - B) that have not changed in any way.
    - C) that have been retrieved.
    - D) except those that have been deleted.

- 1.6 In VB.NET, "StartPosition=WindowsDefaultLocation"
- A) shows the form at the windows default location.
  - B) shows the window in the maximized state.
  - C) shows the form centered in the owner.
  - D) show the window in its minimized state.
- 1.7 Menus can be adjusted at the run time
- A) yes
  - B) no
  - C) yes, but only if they have been declared as context sensitive / popup menus
  - D) yes, but only if it is created at run time through code and not otherwise
- 1.8 structs can be derived from
- A) System.Data
  - B) System.ValueType
  - C) any class
  - D) any struct
- 1.9 Which of the following is not a .NET compatible language?
- A) C++
  - B) J++
  - C) VB.NET
  - D) Java
- 1.10 The *virtual* modifier applies to
- A) function members
  - B) class methods and properties
  - C) class and function members only
  - D) static method only

**2. Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the “tear-off” sheet attached to the question paper, following instructions therein. (1x10)**

- 2.1 DataAdapter.Update command returns or sets a T-SQL statement or stored procedure used to update records in a data source.
- 2.2 Untyped datasets are classes that inherit from the Dataset class but are created using the information in the XML schema.
- 2.3 In VB.Net, Int32 is limited to a maximum value of 2147483647.
- 2.4 System.Collections contains the classes to support Windows Applications Projects.
- 2.5 CLR supports both object-oriented as well as procedural languages.
- 2.6 Reference type variables store the reference of the actual data.
- 2.7 ‘==’ and ‘!=’ operators can be overloaded separately.
- 2.8 XmlTextReader class is a forward-only reader that has methods that return data on content and node types.
- 2.9 Pointers can not be used in C#.
- 2.10 Structure are reference types in .NET structure.

**3. Match words and phrases in column X with the closest related meaning/ word(s)/phrase(s) in column Y. Enter your selection in the “tear-off” answer sheet attached to the question paper, following instructions therein. (1x10)**

X		Y	
3.1	GC stands for	<b>A.</b>	ByVal
3.2	MSIL stands for	<b>B.</b>	BlackBox
3.3	System.Data	<b>C.</b>	The highest superclass from which all .Net objects inherit
3.4	Default mechanism for passing arguments	<b>D.</b>	Microsoft Intermediate language
3.5	System.Object	<b>E.</b>	Maximize, Minimize, Restore a form
3.6	>, <=, >=	<b>F.</b>	DataBinding, DataTable, DataSource
3.7	Form	<b>G.</b>	ByRef
3.8	Encapsulation	<b>H.</b>	WebService, WebServiceAttribute
3.9	WindowState Property	<b>I.</b>	Relational Operator
3.10	System.Web.Services	<b>J.</b>	Late Binding
		<b>K.</b>	The main window for any application
		<b>L.</b>	Garbage Collector
		<b>M.</b>	In or out

4. Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Enter your choice in the “tear-off” answer sheet attached to the question paper, following instructions therein. (1x10)

<b>A.</b>	can	<b>B.</b>	Sealed	<b>C.</b>	Overflow
<b>D.</b>	IndexOutOfRangeException	<b>E.</b>	OutOfRange	<b>F.</b>	sorted
<b>G.</b>	Read only	<b>H.</b>	MachineName	<b>I.</b>	Global.asax
<b>J.</b>	cannot	<b>K.</b>	@Page	<b>L.</b>	@Server
<b>M.</b>	cookie				

- 4.1 Static constructs \_\_\_\_\_ have parameters in C#.
- 4.2 \_\_\_\_\_ methods cannot be overridden in C#.
- 4.3 If you use a wrong indexer value (in C#) where no element exists in an array, an exception of the type \_\_\_\_\_ is thrown.
- 4.4 If a block of code is marked as checked in C#, CLR will enforce \_\_\_\_\_ checking.
- 4.5 Passwords for ASP websites can be stored in \_\_\_\_\_ object.
- 4.6 A DataReader is a \_\_\_\_\_ view of query result.
- 4.7 A DataView can be \_\_\_\_\_.
- 4.8 \_\_\_\_\_ is a Server Object property.
- 4.9 \_\_\_\_\_ file contains the code required for web services events.
- 4.10 More than one \_\_\_\_\_ directive can be set per .aspx page.

## PART TWO

(Answer any **FOUR** questions)

- 5.**
- a) Discuss the concept of properties in C#. Explain with an example.
  - b) In C# what are static constructors?
  - c) What is ID Selector in ASP.Net?
- (5+5+5)**
- 6.**
- a) What is Cookie? Where is it used in .NET?
  - b) How are user defined casts implemented in C#. Explain with an example.
  - c) Name any five operators in C# that cannot be overloaded.
- (4+6+5)**
- 7.**
- a) What are server controls? Discuss in brief.
  - b) Write the code snippet for creating three radio buttons in an ASP page labeled RB01, RB02 and RB03, respectively.
  - c) Name and explain three events stored in the Global.asax file.
- (5+5+5)**
- 8.** Explain the following in briefly.
- a) Execute and Transfer method
  - b) HTML Encode method
  - c) ACID rule of thumb for transactions
- (5+5+5)**
- 9.**
- a) Compare and contrast C# and VB.NET classes.
  - b) Explain the role of XML in Data Access.
  - c) Explain the working of DataReader object with special emphasis on its creation, manipulation and disposal.
- (5+5+5)**