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 **OMR ANSWER SHEET** only, supplied with 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 "OMR" answer sheet supplied with the question paper, following instructions therein.   (1x10)

1.1 Which of the following statements is correct about Managed Code?
A) Managed code is the code that is compiled by the JIT compilers.
B) Managed code is the code where resources are Garbage Collected.
C) Managed code is the code that runs on top of Windows.
D) Managed code is the code that is written to target the services of the CLR.

1.2 What constitutes the .NET Framework?
A) ASP.NET Applications
B) Framework Class Library
C) WinForm Applications
D) Windows Services

1.3 Which of the following statement is not correct about a .NET Assembly?
A) It is the smallest deployable unit.
B) Each assembly has only one entry point - Main (), WinMain() or DLLMain().
C) An assembly can be a Shared assembly or a Private assembly.
D) An assembly can contain only code and data.

1.4 Which of the following statements is correct about namespaces in C#.NET?
A) Namespaces can be nested only up to level 5.
B) A namespace cannot be nested.
C) There is no limit on the number of levels while nesting namespaces.
D) If namespaces are nested, then it is necessary to use using statement while using the elements of the inner namespace.

1.5 Which of the following statements is correct about the using statement used in C#.NET?
A) Using statement can be placed anywhere in the C#.NET source code file.
B) It is permitted to define a member at namespace level as a using alias.
C) A C#.NET source code file can contain any number of using statement.
D) By using using statement it is possible to create an alias for the namespace but not for the namespace element.

1.6   Which of the following assemblies can be stored in Global Assembly Cache?
A)   Private Assemblies
B)   Friend Assemblies
C)   Shared Assemblies
D)   Public Assemblies

1.7   Web.config file is used
A)   Configures the time that the server-side code behind module is called
B)   To store the global information and variable definitions for the application
C)   To configure the web server
D)   To configure the web browser

1.8   Which of the following object is not an ASP component?
A)   LinkCounter
B)   Counter
C)   AdRotator
D)   File Access

1.9   What class does the ASP.NET Web Form class inherit from by default?
A)   System.Web.UI.Page
B)   System.Web.UI.Form
C)   System.Web.GUI.Page
D)   System.Web.Form

1.10   What does IDE stand for?
A)   Integrated Development Environment
B)   Integrated Design Environment
C)   Interior Development Environment
D)   Interior Design Environment

2.   **Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the "OMR" answer sheet supplied with the question paper, following instructions therein.   (1x10)**

2.1   Does C# support a variable number of arguments?

2.2   Can you have parameters for static constructors?

2.3   Can you override private virtual methods?

2.4   Is it Possible to use var Keyword for global Declaration?

2.5   Is static modifier allowed in a Constant declaration?

2.6   Can you store multiple data types in System.Array?

2.7   Is it Possible to declare an array variable without initialization?

2.8   Is Bool a value Type in C#.net?

2.9   Can we have return statement in Final block?

2.10   Can you store multiple data types in System.Array?

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 "OMR" answer sheet supplied with the question paper, following instructions therein. (1x10)

	X		Y
3.1	Validation control	**A.**	MSIL
3.2	CTS emphasis on	**B.**	Load
3.3	CLS emphasis on	**C.**	Init ( )
3.4	Class library generates	**D.**	Custom Validation
3.5	Delegate relates to	**E.**	Data type
3.6	Namespaces	**F.**	DLL
3.7	ADO connected approach used	**G.**	EXE
3.8	Primary method that is fired during page load	**H.**	Funct and action
3.9	MSIL codes work on	**I.**	System.array
3.10	Term in C# related to Bytecode in Java	**J.**	Data reader
		K.	JIT compiler
		L.	Lamda expression
		M.	Multi language support

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 "OMR" answer sheet supplied with the question paper, following instructions therein. (1x10)

A.	System.GC.Collect()	**B.**	GC.SuppressFinalize()	**C.**	Sealed
D.	Virtual	**E.**	Abstract	**F.**	Managed
G.	System.object	**H.**	HashTable	**I.**	Application caching
J.	Boxing	**K.**	IDisposable	**L.**	anonymous type
M.	Private				

4.1 _____ is the root of the .NET type hierarchy?

4.2 *DISPOSE* method belongs to _____ interface.

4.3 _____ method suppress the finalize process inside the garbage collector forcibly in .NET.

4.4 _____ keyword is to prevent the class from overridden.

4.5 _____ code is the code that is executed directly by the CLR instead of the operating system.

4.6 _____ .NET data type that allows the retrieval of data by a unique key.

4.7 _____ Convert value type to reference type.

4.8 _____ allows a Data types to encapsulate a set of properties into a single object without having to first explicitly definition type.

4.9 _____ item cached will remain unique for the entire web application.

4.10 _____ class cannot be inherited into derived class.

PART TWO
(Answer any **FOUR** questions)

5.
a) What is an Assembly? Explain the types and use of assembly in detail?
b) Explain the Execution model of Common Language Runtime and write the advantages?
c) Develop a C# Program which shows the use of Indexers array and property in a live example.

(5+5+5)

6.
a) Write the code snippet to load random image on page load in ASP.NET?
b) What are web services? Differentiate between windows and web services.
c) What is XML? Why we use it, explain with an example?

(5+5+5)

7.
a) Discuss ASP.NET page life cycle and their stages.
b) What is role of Global.asax file? Name the methods that can be define in Global.asax file.
c) Compare and contrast C# and VB.net classes.

(5+5+5)

8.
a) Why do we use Generic collection classes? Explain with example of Queue or Dictionary generic classes by using important methods.
b) Discuss all three types (single, multiple, jagged) of array in C#.
c) Explain the concept of data reader and data adapter object.

(5+5+5)

9.
a) With the help of example explain the concept of boxing and unboxing.
b) Write standard web server controls categories also mention the base class.
c) Discuss five objects of ADO.net.

(5+5+5)