

M4.1-R4: APPLICATION OF .NET TECHNOLOGY

NOTE:

IMPORTANT INSTRUCTIONS:

1. Question Paper in English and Hindi and Candidate can choose any one language.
2. **In case of discrepancies in language, English version will be treated as final.**
3. There are **TWO PARTS** in this Module/Paper. **PART ONE** contains **FOUR** questions and **PART TWO** contains **FIVE** questions.
4. **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.
5. 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 utilities can be used to compile managed assemblies into processor-specific native code?

- A) Gacutil
- B) ngen
- C) dumpbin
- D) ildasm

1.2 Which of the following jobs are NOT performed by Garbage Collector?

- i) Freeing memory on the stack.
- ii) Avoiding memory leaks.
- iii) Freeing memory occupied by unreferenced objects.
- iv) Closing unclosed database collection.
- v) Closing unclosed files.

- A) i), ii), iii)
- B) iii), v)
- C) i), iv), v)
- D) iii), iv)

1.3 Which of the following constitutes the .NET Framework?

- i) ASP.NET Applications
- ii) CLR
- iii) Framework Class Library
- iv) WinForm Applications
- v) Windows Services

- A) i), ii)
- B) ii), iii)
- C) iii), iv)
- D) ii), v)

- 1.4 Which of the following is the root of the .NET type hierarchy?
- A) System.Object
 - B) System.Type
 - C) System.Base
 - D) System.Parent
- 1.5 If in an ASP.NET application one want to create http handlers which of the interface is used
- A) None of the above
 - B) pipeline
 - C) Handler
 - D) IHttpHandlerFactory
- 1.6 Which of the following is not a .NET compatible language?
- A) C#
 - B) VB.NET
 - C) COBOL.NET
 - D) Java
- 1.7 In ASP.NET page framework an automatic way to associate page events and methods is
- A) AutoEventWireup attribute of the Page directive is set to true
 - B) AutoEventWireup attribute of the Page directive is set to False
 - C) It is not possible to set automatically page events and methods
 - D) None of the Above
- 1.8 The Following are the minimum requirement to run Asp.net pages
- A) Java Virtual Machine
 - B) Common Language Runtime
 - C) Windows explorer
 - D) None of the above
- 1.9 Which of the following is true?
- A) IsPostBack is a method of System.UI.Web.Page class
 - B) IsPostBack is a method of System.Web.UI.Page class
 - C) IsPostBack is a readonly property of System.Web.UI.Page class
 - D) None of the above
- 1.10 Why is Global.asax is used?
- A) Implement application and session level events
 - B) Declare Global variables
 - C) No use
 - D) All of the above

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 Can we have a web application running without web.Config file?
- 2.2 It is possible to set Maximum length for a text box through code.
- 2.3 Does the “EnableViewState” allows the page to save the users input on a form.
- 2.4 There can be more than 1 machine.config file in a system.
- 2.5 A property can be declared inside a namespace or a procedure.
- 2.6 ASP makes a website more interactive and dynamic.
- 2.7 C# does not allow multiple inheritances.
- 2.8 There does not exist a way to print an element of an enum as a string.
- 2.9 A function can be used in an expression, whereas a subroutine cannot be.
- 2.10 Can static procedures access instance data?

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	From which base class all Web Forms are inherited?	A.	Managed Code
3.2	What is the default Session modes in asp.net?	B.	System.StackOverflowException
3.3	Which of the following is the necessary condition for implementing delegates?	C.	Entrypoint
3.4	Code that targets the Common Language Runtime is known as	D.	FileInfo
3.5	Which of the following should be used to implement a 'Has a' relationship between two entities?	E.	Page class
3.6	Which of the following CANNOT occur multiple number of times in a program?	F.	CRE
3.7	String s1 = "ALL MEN ARE CREATED EQUAL"; String s2; s2 = s1.Substring(12, 3); Console.WriteLine(s2);	G.	Persistent
3.8	Handles errors generated from stack overflow.	H.	Encapsulation
3.9	Used for performing operations on files.	I.	CR
3.10	Cookies are generally used to store information that identifies a returning user to a Web site.	J.	Containership
		K.	InProc
		L.	File
		M.	Class declaration

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.	“as”	B.	Reflection	C.	Panels
D.	Ctype	E.	“throw”	F.	Serialization
G.	delegates	H.	“throw ex”	I.	System. Globalization
J.	sealed	K.	Dispose()	L.	structure ,classes
M.	Direct Cast				

- 4.1 _____ is a process of converting an object into a stream of bytes.
- 4.2 The _____ modifier is used to prevent derivation from a class.
- 4.3 _____ is the ability to find the information about types contained in an assembly at runtime.
- 4.4 _____ operates deterministically due to which it is generally preferred.
- 4.5 _____ operator is used for casting of object to a type or a class.
- 4.6 _____ is used for conversion where the conversion is defined between the expression and the type.
- 4.7 It is always advised to use _____ because it provides more accurate error information.
- 4.8 Both _____ and _____ can implement interfaces to use multiple-inheritance in code.
- 4.9 The developer can define culture specific information using the _____ namespace.
- 4.10 _____ acts as a container to group other controls.

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

- 5.**
- a) What is the difference between `Server.Transfer` and `Response.Redirect`? Why would I choose one over the other?
 - b) What's the C# equivalent of C++ `catch (...)`, which was a catch-all statement for any possible exception?
 - c) What is the difference between early-binding and late-binding?
- (5+5+5)**
- 6.**
- a) What are various types of directives in .NET?
 - b) What is the difference between `typeof(foo)` and `myFoo.GetType()`?
 - c) What is difference between `MetaData` and `Manifest` in .Net framework?
- (5+5+5)**
- 7.**
- a) How does the generational garbage collector in the .NET CLR manage object lifetime? What is non-deterministic finalization?
 - b) What is the difference between `IEnumerable<T>` and `List<T>`?
 - c) Explain the importance and use of each, `Version`, `Culture` and `PublicKeyToken` for an assembly.
- (6+4+5)**
- 8.**
- a) Describe the role of `inetinfo.exe`, `aspnet_isapi.dll` and `aspnet_wp.exe` in the page loading process.
 - b) Is it possible to add custom object as a key in `HashTable`, if so how to retrieve the stored value?
 - c) Why to use "Nullable Coalescing Operator" (??) in C#?
 - d) What is the difference between "as" and "is" operators in C#?
- (5+4+3+3)**
- 9.**
- a) Explain what a diffgram is and its usage?
 - b) What is DLL Hell, and how does .NET solve it?
 - c) Explain Indexers in C#?
 - d) Explain Anonymous type in C#?
- (5+4+3+3)**