

Time : 2½ Hours]**[Total Marks : 70**

1. Attempt the following multiple choice questions :

15

(1) Which of the following is not supported by C# ?

- (a) Multiple inheritance
- (b) Operator overloading
- (c) (a) and (b) both
- (d) None of these

(2) Which of the following operator can be overloaded in C# ?

- (a) ?:
- (b) []
- (c) ()
- (d) None of these

(3) Which of the following is correct ?

- (a) Exception handling is used for the errors that crop at the compile time
- (b) Exception handling is used for polymorphism
- (c) Exception handling is used for run time error checking
- (d) None of these

(4) Which of the following is not used in Exception handling ?

- (a) try
- (b) final
- (c) finally
- (d) none of these

- (5) What happens when you remove `int.parse()` from the `Sqrt` method ?
- (a) the code will not be compiled
 - (b) the format exception is thrown
 - (c) arithmetic exception is thrown
 - (d) none of these
- (6) Which of the generics can deal with custom classes ?
- (a) Sorted List (b) Queue
 - (c) Stack (d) All of the above
- (7) Which of the following can be implemented with generic ?
- (a) Stack (b) Queue
 - (c) (a) and (b) both (d) None of these
- (8) Which of the following statements is correct ?
- (a) Generics in C# is same as in C++.
 - (b) There is hardly any difference between generic and collection
 - (c) collections are better than generic
 - (d) none of these
- (9) Which of the following statements is correct ?
- (a) Generics implements `Comparable`
 - (b) Some of the generics may implement `Comparable`
 - (c) No generics implements `Comparable`
 - (d) None of these
- (10) Which of the following namespace is used for threading ?
- (a) `system.thread` (b) `System.Thread`
 - (c) `System.Threading` (d) None of these
- (11) Which of the following is classes used in thread in C# ?
- (a) Thread (b) Mutex
 - (c) Timer (d) All of the above

(12) Which of the following is not the thread priority ?

- (a) Highest (b) Below highest
(c) Above average (d) None of these

(13) Which of the following is the method of the thread class ?

- (a) Sleep (b) Wakeup
(c) Don't Sleep (d) None of these

(14) Which of the following statement is correct ?

- (a) Threads share a common address space
(b) Threads have different memory spaces
(c) Processes have the same address space
(d) None of these

(15) In order to make more than one thread run at a time, which of the following classes may be used :

- (a) ThreadPool (b) Pooling
(c) ThreadStack (d) None of these

2. Attempt any **five** of the following :

15

- (1) List the operators that can not be overloaded in C#.
 (2) Explain finally statement with suitable example.
 (3) Differentiate Compile time error Vs. run time error.
 (4) Briefly explain namespace.
 (5) Explain the reference data type with suitable example.
 (6) What is GC ? Explain the GC mechanism in C#.

3. Attempt any **three** of the following :

15

- (1) Briefly explain nesting of try....catch in C#.
(2) Write short note on synchronization.
 (3) Briefly explain save file dialog with suitable example.
 (4) Write a C# code that will take a path from the user and displays all the directory and file inside it.

4. Attempt any **two** of the following :

15

- ✓ (1) What is Exception ? List at least five different exception handling classes of C#. Explain any one of them with suitable example.
- ✓ (2) Write a C# code that will copy a file from one location to another location. While copying the file give the status with the help of the progress bar.
- (3) Write a C# code that will create a menu with three menu bar. Each menu bar consists atleast four sub option with separator and sub-sub menu.

5. Attempt any **one** of the following :

10

- ✓ (1) Write a C# program that will overload the unary ++ operator to perform the addition of a complex number. (It will add 1 to real as well as add 1 to imaginary part of the complex number)
 - (2) Explain .net architecture in detail.
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MCA Semester IV Examination
May-2013
CCA4003. Net frame work and C#

Faculty Code : 003
Subject Code : 007403

Time : 2 ½ Hours]

[Total Marks : 70

1. Answer the following Multiple Choice Questions :

15

(1) CLR compiles the code from

- (a) IL to platform specific code
- (b) Source code to IL
- (c) Source code to managed code
- (d) Source code to unmanaged code

(2) CTS stands for

- (a) Common Type Specification
- (b) Common Type System
- (c) Command Type System
- (d) None of these

(3) NET uses a tool to take advantage of metadata and reflaction is

- (a) ISLDAM
- (b) ILDASM
- (c) ILASDM
- (d) ILSDSM

(4) Constant variables are always

- (a) static
- (b) public
- (c) private
- (d) none of these

(5) Reference type variables are stored in

- (a) heap memory area
- (b) stack memory
- (c) o.s. memory area
- (d) none of these

- (6) To define alias of namespace,
- (a) using <alias name> = <namespace name>
 - (b) <alias name> = <namespace name>
 - (c) namespace <namespace name> as <alias name>
 - (d) namespace <namespace name> alias <alias name>
- (7) C# uses _____ types of comments
- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
- (8) Which is wrong among the following ?
- (a) int→System.Int16
 - (b) uint→System.UInt32
 - (c) long→System.Int64
 - (d) ulong→System.UInt64

(9) using System;
 namespace mca4
 {
 class demo
 {
 public static void Main(string[] args)
 {
 string s1="Hello World";
 string s2=s1;
 s2="Mca-4";
 Console.WriteLine(s1);
 }
 }
 }

Output is :

- (a) Mca-4
 - (b) Hello World
 - (c) Cant say
 - (d) None
- (10) class Test: Form { }
- (a) Creates the class Test : Form
 - (b) Creates the class Test that inherits the class Form
 - (c) Creates the class form that inherits the class Test
 - (d) (a) and (b)

(11) The code `public class B : A { }`

- (a) Defines a class that inherits all the methods of A
- (b) Defines a class that inherits the public and protected methods of A
- (c) Errors
- (d) (a) and (b)

(12) A Thread is :

- (a) an object that allows computer multitasking
- (b) an object that wraps itself with other threads
- (c) a deprecated object that is no longer used
- (d) none of the above

(13) In C# `Thread.Sleep(time)` measures time in:

- (a) seconds
- (b) milliseconds
- (c) nanoseconds
- (d) all of the above

(14) In event-driven programming an event is generated by

- (a) the system
- (b) a user's action
- (c) the program itself
- (d) all of the above

(15) Which `TextBox` property should always be changed first ?

- (a) `AcceptsReturn`
- (b) `BorderStyle`
- (c) `Font`
- (d) `Name`

2. Attempt any **five** of the following :

15

- (1) What are Jagged Arrays in C# ?
- (2) How do you prevent the class from being inheritance ?
- (3) What is the difference between instance data and class data ?
- (4) Explain the significance of static method.
- (5) Explain the uses of boxing and unboxing.
- (6) What is the difference between `Finalize()` and `Dispose()` ?

3. Attempt any **three** of the following : 15
- (1) What is Form level Validation and Field level Validation ?
 - (2) What are generics in C#.NET ?
 - (3) What is an Exception in .NET ? Write a suitable example.
 - (4) What's an abstract class ? Write a suitable example.
4. Attempt any **two** of the following : 15
- (1) What is Delegate ? Explain.
 - (2) List and explain various properties and methods of Checkbox control.
 - (3) What is partial class ? Explain with suitable example.
5. Attempt any **one** of the following : 10
- (1) In a new source file **TestDelegate.cs**, declare a delegate type **IntAction** that has return type void and takes as argument an int.
Declare a static method PrintInt that has return type void and takes a single int argument that it prints on the console.
Declare a variable act of type IntAction and assign method PrintInt (as a delegate) to that variable.
Call act(42).
Declare a method

```
static void Perform(IntAction act, int[]arr) {...}
```

that applies the delegate act to every element of the array arr.
Use the foreach statement to implement method Perform.
Make an int array arr and call Perform (PrintInt, arr)
 - (2) Can virtual methods be overridden in C#.NET ? Demonstrate with suitable example.



MW-841

003-007403

M. C. A. (Sem. IV) (CBCS) Examination

May/June - 2012

CCA - 4003 : .NET Framework & C#

Faculty Code : 003

Subject Code : 007403

Time : 3 Hours]

[Total Marks : 70

1 Answer the following multiple choice questions. 15

- (1) The only operator that C# uses for referencing namespaces, members and references is
 - (a) :: operator
 - (b) -> operator
 - (c) .operator
 - (d) ^operator
- (2) C# does not support _____
 - (a) Casts
 - (b) Safe Casts
 - (c) Unsafe Casts
 - (d) None of the above.
- (3) C++ Programming language's dynamic memory management and pointer arithmetic is
 - (a) Not provided in C#
 - (b) Provided in C# exactly as by C++
 - (c) Provided through safe code
 - (d) Provide through unsafe code.
- (4) CLR stands for
 - (a) Complex Language Rule
 - (b) Common Language Runtime
 - (c) Common Language Rule
 - (d) Complex Language Runtime
- (5) What is a technique in C# which class provides notifications to clients of that class when something happens to an object of that class?
 - (a) Attribute
 - (b) Event
 - (c) Type
 - (d) Indexer

- (6) The range of int in C# is _____
- (a) 0 to 65535
 - (b) -32768 to 32767
 - (c) -2147483648 to 2147483647
 - (d) 0 to 4294967295
- (7) An object in C# is of type _____
- (a) reference
 - (b) value
 - (c) static
 - (d) local
- (8) Types of arrays in C# are _____
- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
- (9) Which of the inheritance is not supported by C#.net ?
- (a) multiple
 - (b) multilevel
 - (c) hierarchical
 - (d) All of the above
- (10) Which of the following class modifier hides a member inherited from base class ?
- (a) sealed
 - (b) private
 - (c) internal
 - (d) new
- (11) RTTI in C++ then similar to this what is in C#.net?
- (a) Abstraction
 - (b) Reflection
 - (c) Collection
 - (d) Exception
- (12) "Try block can not be written without using catch block". This statement is
- (a) True
 - (b) False
 - (c) Partially true
 - (d) Sometimes True Sometime false

- (13) Interface members can not be declared with _____
- (a) protected
 - (b) abstract
 - (c) internal
 - (d) All of the above
- (14) Which of the following is programming basics namespace in C# ?
- (a) System.Threading
 - (b) System.Runtime
 - (c) System.Net
 - (d) System.Windows
- (15) An abstract method declaration cannot be used with the _____ modifier.
- (a) Public
 - (b) Extern
 - (c) Static
 - (d) Virtual

2 Attempt any five of the following : **15**

- (1) What is Net ? Explain Just in time compilation in detail.
- (2) Explain garbage collection in net.
- (3) Differentiate Value type Vs reference type in C#.net
- (4) Define namespace? Explain organizing library with namespaces.
- (5) How polymorphism is achieved in C#.net? Explain it with suitable example.
- (6) Explain BCL.

3 Attempt any three of the following : **15**

- (1) What is interface? Explain the usefulness of it using a proper example.
- (2) Explain multicast event delegation model.
- (3) Explain exception handling in C#. What is the use of finally block ?
- (4) Explain following in brief :
 - (a) Menu strip
 - (b) Context menu strip
 - (c) Status strip
 - (d) Container
 - (e) Panel.

- 4 Attempt any two of the following 15
- (1) What is serialization? Explain it in detail.
 - (2) What is multithreading? Explain communicating data to a thread with suitable example.
 - (3) How generic programming is achieved in C#.net? Write a program to create a vector of different types using generics?
- 5 Attempt any one of the following 10
- (1) Write a program that will read a given text file num.txt of numbers separated by white spaces and sort these numbers in increasing order and write to it to num_sort.txt file.
 - (2) Design and develop a window based program to develop a simple editor having facilities of new, open, save, close and exit.