DiplETE – CS (NEW SCHEME)   -   Code: DC69

Subject: C# & .NET

Time: 3 Hours

JUNE 2011

Max. Marks: 10

NOTE: There are 9 Questions in all.
- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
- **The answer sheet for the Q.1 will be collected by the invigilator after 45 Minutes of the commencement of the examination.**
- **Out of the remaining EIGHT Questions, answer any FIVE Questions. Each question carries 16 marks.**
- **Any required data not explicitly given, may be suitably assumed and stated.**

Q.1   **Choose the correct or the best alternative in the following:**   **(2×10)**

a. Which of the following types cannot be used to control a switch statement in C#?

   (A) integer   **(B)** character
   (C) String   **(D)** floating point

b. In C# you can create an infinite loop using the syntax:

   (A) for(; ;) { }   **(B)** for( ) { ; ; }
   (C) for( ) { }   **(D)** None of the above.

c. An example of ternary operator in C# is :

   (A) ? :   **(B)** ^ =
   (C) >>   **(D)** > =

d. A switch statement can be used to replace a:

   (A) simple if else statement.   **(B)** while statement.
   (C) series of if….else statement.   **(D)** foreach statement.

e. String class supports overloaded methods and operators to compare whether two
   strings are equal or not by using :

   (A) Overloaded Compare( ) method. **(B)** Overloaded Equals( ) method.
   (C) Overloaded Cmp( ) method.   **(D)** Both **(A)** and **(B)**.

f. Late binding can also be called:

   (A) Dynamic binding   **(B)** Static binding
   (C) Abstract binding   **(D)** Sealed Binding.

g. Delegates are of:

   (A) Value type.   **(B)** Reference Type
   (C) Both **(A)** and **(B)**.   **(D)** None of the above

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h. Which of the following is not from the Input/Output streams?

(A) Console. In **(B)** Console.Out
(C) Console.InOut **(D)** Console. Error.

i. Which of the following is not in correct sequence while handling exception is C#?

(A) try…..finally… **(B)** try…catch…catch…finally..
(C) try….catch…finally… **(D)** catch…finally.

j. Which of the following is an example of a correct String class method:

(A) Cmp( ) **(B)** Cpy ( )
(C) ConCat( ) **(D)** None of the choices

Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.

Q.2 a. What is common language specification? How does the CLR implements a C# program? **(6)**

  b. What are command line arguments? How are they useful? **(6)**

  c. Explain with the help of a neat diagram the taxonomy of C# data types. **(4)**

Q.3 a. List the relational and logical operators available in C#. Write a simple C# program which demonstrates the use of these operators. **(8)**

  b. Write a program by using while loop to reverse the digits of the numbers.
  For example: Input : 12345
                Output : 54321 **(8)**

Q.4 a. With suitable example explain the concept of pass by value and pass by reference in C#. **(6)**

  b. What is the need for jagged array in C#? Give an example. **(4)**

  c Write a C# program that creates an array of integers and gives it some initial values. The program should display these values and their summation (use the foreach construct of C#). **(6)**

Q.5 a. Explain any three string handling methods available in C#. Emphasize on the general syntax of the method and its description. **(6)**

  b. Write a C# program that reads an integer and displays the digits of the integers in words. **(6)**

    Example: 543
  Number in Words: FIVE FOUR THREE.

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c. State the difference between Classes and Structures. Explain your answer suitable code snippets.

Q.6 a. Explain the different member access specifiers available in C#. **(6)**

b. What are Abstract Classes and Methods, Explain their importance. **(5)**

c. What is inheritance? Explain classical inheritance with suitable diagrams. **(5)**

Q.7 a. Distinguish between an abstract class and an interface. **(8)**

b. Describe overloading of unary and binary operators. **(8)**

Q.8 a. Explain the importance of delegates in C#. Write a simple C# code to create and implement a delegate. **(6)**

b. List the console Input and Output statements available in C#. **(2)**

c. What are Events? Write a C# program which demonstrates the features of an event. **(8)**

Q.9 a. How do you define the following in C#:
(i) try block.
(ii) catch block.
(iii) finally block. **(6)**

b. List any four commonly used exceptions defined within the System Namespace.
(2)

c. What is a thread in C#? Write a simple C# program which creates three child threads. **(8)**