2019

C#AND.NET FRAMEWORK

Paper : CS 814

Full Marks : 100

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

*Answer **any five** questions.*

1.   *(a)*   Define the following terms briefly :

                                               2×5=10

        (i)   .NET Technology

        (ii)   Method

        (iii) Public

        (iv) Class

        (v)   Inheritance.

(b) Differentiate between : 2×5=10

    (i) Private and Protected

    (ii) Boxing and Unboxing

    (iii) String and String Builder Class

    (iv) Value type and Reference type

    (v) .OLE and .COM Technology.

2. (a) Why C# is sharper than C++ ? Explain. 3

   (b) What is an alias ? What is its benefits ? 2+2=4

   (c) Define output parameter. Give an example showing the use of an output parameter. 3+5=8

   (d) Write a program to insert 20 cities using an ArrayList ( ) class. 5

3. (a) Why C# is called type safe ? 5

   (b) Mention *four* functions performed by Common Language Runtime (CLR). 4

(c) Why a Constructor is needed in a program ? Give a suitable program showing the use of a Constructor. 2+4=6

(d) Write a program that will read a string and rewrite it in alphabetical order. For example, the word STRING should be written as GINRST. 5

4. (a) What is Copy Constructor ? Write a program in C# showing the use of a copy constructor. 3+6=9

   (b) What is virtual method ? How can it be implemented ? 3+3=6

   (c) Write a program that reads a line of text containing three words and then replace all the blank spaces with an underscore (_). 5

5. (a) What is Overloaded Constructor ? Give a suitable example. 2+4=6

   (b) Write a method to check whether an element is present in an array or not. If present, the method will return true. 8

(c) Write a program that reads the name "Central Government" into two separate string objects and concatenate them into a new string using 3×2=6

(i) + operator

(ii) Append method.

6. (a) There is a class name "TIME" containing the following information : 12

- Two integer data members minutes and hours

- Two overloaded constructors

- One method to display the class data members

One of the constructors takes two integer parameters to assign values to two data members and the other constructor takes one integer parameter representing total number of minutes and convert it into hours and minutes. Write a program to implement the above.

(b) Mention *four* benefits of .NET approach. 4

(c) Write a program using the Array Class to sort the names of 15 countries. 4

7. Write short notes on : *(any four)* 5×4=20

(a) Param

(b) Virtual method

(c) Runtime polymorphism

(d) Switch statement

(e) Static constructor

(f) Break statement.

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