2018

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) Briefly describe the following terms : 2×5=10

    (i)   .NET technology

    (ii) Namespace

    (iii) Class

    (iv) Private

    (v)   Array List.

(b) Differentiate between the followings : 2×5=10

(i) OLE and COM technology

(ii) String and StringBuilder class

(iii) Value type and Reference type Variables

(iv) Public and Protected

(v) Compile time and Runtime polymorphism.

2. (a) What is CLR ? What are the functions of CLR ? 2+5=7

(b) Why C# is called type-safe ? Mention. 5

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

3. (a) What is a Copy Constructor ? Give a suitable example showing the use of a copy constructor. 3+5=8

(b) Write a program to insert 25 cities using a ArrayList( ) class. Also print the cities in ascending order. 4+4=8

(c) Mention four benefits of .NET approach. 4

4. (a) Why constructors are used in a program ? Give a suitable example showing the use of parameterized constructors. 2+5=7

(b) What is Param ? How Param can be used in a program ? Show with an example. 2+5=7

(c) What is a Structure ? How a structure is different from a class ? Justify. 2+4=6

5. (a) Write a program that reads a line of text containing three words and then replace all the blank spaces with an underscore (_). 6

(b) What do you mean by a virtual method ? Give an example of implementation of a virtual method in a program. 3+6=9

(c) What is a Static Constructor? How is it different from a non-static constructor? 2+3=5

6. (a) Define a Time Class containing the following members: 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 values as parameters to assign values to the 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 verify the operation of the constructors and the method.

(b) How two strings can be concatenated using? 4×2=8

(i) + operator

(ii) Append method.

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

(a) Switch ( ) Statement

(b) .NET Framwork

(c) String

(d) Boxing and Unboxing

(e) Alias

(f) Object Oriented Programming.

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