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53 (CS 814) C#NF

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 : 2x5=10
- (i) Namespace
 - (ii) Reference parameters
 - (iii) .NET technology
 - (iv) Private
 - (v) .NET Framework.

Contd.

Differentiate between : 2x5=10

(b)

- (i) Value type and reference type
- (ii) Array and ArrayList class
- (iii) Public and protected
- (iv) Boxing and Unboxing
- (v) Static method and non-static method.

2. (a) Why C# is known as modern language ?
C# is a type safe language, justify your answer. 2+4=6

(b) Define output parameter. Give suitable example showing the use of output parameters. 2+4=6

(c) Write a program showing use of a static method. 4

(d) What is an alias ? How can it be achieved ? 4

3. (a) Mention four functions performed by Common Language Runtime (CLR). 4

(b) Write a method to check whether an element is present in an array or not. If present, the method will return true. 6

(c) What is copy constructor ? Write a program in C# showing the application of a copy constructor. 2+4=6

(d) What is parameter arrays ? Give a suitable example of parameter arrays. 1+3=4

4. (a) Why a constructor is needed in a program ? Write a suitable program which shows the application of a constructor. 1+4=5

(b) What is meant by static constructor ? How does it differ from non-static constructor ? 2+3=5

(c) Write a program that reads the name "Mother India" into two separate string objects and then concatenates them into a new string using : 3x2=6

(i) + operator

(ii) Append method.



(a)

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

4

5. (a) Define the Time Class containing the following members : 10

- 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 verify the operation of the constructors and the method.

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

4

(c) Write a program to insert 50 cities using an ArrayList() and display the same in ascending order.

6

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

- (a) Virtual method
- (b) Runtime polymorphism
- (c) String Builder() Class
- (d) Continue Statement
- (e) Switch Statement.

