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53 (CS 814) CANF

2017

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) (i) State at least five most important highlights of C# language. 5
- (ii) Why C# is called type safe language? 3
- (iii) C# is a modern language. Comment. 2
- (b) Differentiate between : 2×5=10
- (i) While and do while loops
- (ii) Break and continue statements

Contd.

(iii) Fixed and variable length variables

(iv) Private and protected

(v) Array and Array List classes.

2. (a) What is an alias? Where and how it is used? 2+4=6

(b) What is .NET technology? Describe briefly its origins. 2+6=8

(c) Using while loop reverse the digits of a number (e.g. 1234 as 4321). 6

3. (a) What is boxing and unboxing? Give an example of each. 2+4=6

(b) Write a method that would take an array as input and check whether a given element is present in the list or not. The method would return true if present. 8

(c) Define output parameter. Calculate the area of a circle using output parameter.

2+4=6

4. (a) How would you compare two strings? $2 \times 3 = 6$

(i) Using Compare () method

(ii) Using Equals () method

(iii) Using == operator.

(b) Write a program $3 + 2 + 3 = 8$

(i) To store 50 cities

(ii) To sort the cities in ascending order

(iii) To search a particular city.

(c) (i) Distinguish between String and String Builder classes.

(ii) Write a program that reads a line of text containing three words and replace all the blank spaces with an underscore (_). $2 + 4 = 6$

5. (a) What is a constructor? Show the application of constructor(s) in a program. $2 + 4 = 6$

(b) What is copy constructor? Show the use of it in a program. $2 + 4 = 6$

- (c) (i) Give *two* differences between a structure and a class. In what ways are they similar? $2+2=4$
- (ii) Define the terms polymorphism and inheritance. $2 \times 2 = 4$
6. (a) What is virtual method? How can it be implemented? $2+4=6$
- (b) Define late binding. Give a suitable example. $2+6=8$
- (c) Briefly explain about three class visibility modifiers. $2 \times 3 = 6$
7. Write short notes on : **(any four)** $5 \times 4 = 20$
- (a) Reference parameter
- (b) .NET Framework
- (c) Params
- (d) Switch Statement
- (e) Static Constructors
- (f) Encapsulation.
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