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53 (CS 814) CNFW

2015

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) Differentiate between : $2 \times 5 = 10$
- (i) Protected and Public
 - (ii) Value types and reference types
 - (iii) OLE and COM technology
 - (iv) Write() method and WriteLine() method
 - (v) String class and String Builder class

Contd.

(b) Define the following terms briefly :

2×5=10

(i) .NET technology

(ii) Copy constructor

(iii) Class

(iv) Variable

(v) Mutable strings

2. (a) What is namespace? How can it be imported into a C# program?

2+2=4

(b) What is an alias? How is it used?

2+2=4

(c) What are the benefits of .NET approach?

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(d) What is the Common Language Runtime (CLR)? How does CLR implements a C# program?

3+5=8

3. (a) Briefly explain the pillars of OOP.

6

(b) What is static constructor? How is it different from non-static constructor?

2+2=4

- (c) Design a class to represent a bank account. Include the following members: 10

Data members :

- Name of depositor
- Account number
- Account type
- Balance in the account

Methods :

- To deposit an amount
- To withdraw an amount
- To display the name and balance

Write a program to perform the given operations as mentioned in the methods.

4. (a) What is output parameter? Give an example. 2+3=5
- (b) Write a method to check whether an element is present in an array or not. If present the method will return true. 5
- (c) What is Parans? Explain with an example. 2+3=5
- (d) Write a program to insert n number of cities using an ArrayList() class and display them. 5

5. (a) Mention the steps in overloading an operator. 3
- (b) Write a program to overload unary minus. 5
- (c) Define operation polymorphism and inclusion polymorphism. Illustrate each with suitable examples. $2 \times 2 + 2 \times 4 = 12$
6. (a) What is overriding methods? Illustrate with an example. $2 + 6 = 8$
- (b) How C# is different from Java? 3
- (c) Write a program showing implementation of constructors and methods in a structure. 6
- (d) Why do we need overloaded constructor? 3
7. Write short notes : **(any four)** $4 \times 5 = 20$
- (a) Method hiding
- (b) Multiple inheritance
- (c) Framework base classes
- (d) Switch statement
- (e) Polymorphism
- (f) Inheritance.
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