Q.2 a. List and briefly explain the characteristics of C#.

Ans 2 a . Characteristics of C# -

Simple, object oriented, compatible, consistent, type safe, interoperable, modern, versionable and flexible

Q2 b. Explain the different services provided by CLR of .NET framework.

Ans 2.b.CLR provides services such as

a. Loading and executing programs
b. Memory isolation for applications
c. Verification of type safety etc.

It has components such as common type system, common language specification and Microsoft Intermediate Language.

Q.3a. Explain while statement with the help of general syntax and example. How it is different from do statement?

Ans Page 119, 121 of Text Book 1

3b. Explain, what is conditional operator? Write a program to find the larger of three integers using conditional operator.

Ans. Page 111 of Text Book 1

Q.4a. How we access the length of the array? Explain with the help of an example. Write a program that uses array length method for sorting a list of numbers.

Ans. Page 172-173 of Text Book 1

4.b Differentiate between pass by value and pass by reference with examples.

Ans. Pass by value vs pass by reference with examples

Q.5 a. Explain any four string methods used in C# programming.

Ans Length, compare To, equals, concat, insert, copy, intern etc. any five.

Q5b. What is enumeration? How is it useful in C# programming?

Ans. Page231 of Text Book 1

Q.6a. What is inheritance? Give its general syntax? With the help of example, explain the difference between multilevel and hierarchical inheritance.

Ans 6a. Page 284, 293 & 297 of text book 1

6b. Explain the different C# access modifiers used to control accessibility of members of a class.

Ans 6b. Public private, protected and default

Q.7 a. Define abstract class. How it is different from interfaces?

Ans 7.a . Abstract class vs interface

Q7.b. Explain operator overloading. Write some operators in C# that cannot be overloaded.

Ans7 b. Operator overloading

Q.8 a. Define delegates. What are the four steps involved in creating and using delegates?

Ans 8.a. Delagates: type or signature of the method, delegate reference, actual method reference

Q8 b.What are events? How does C# handle events? Give example where events are used. (2+4+2)

Ans 8.b. Events – an activity
Define public delegate
Define a class to raise event
Define a class to receive even

Q9 a. What is an exception? With a neat block diagram explain exception handling code.

Ans 9.a. Exception – condition caused by run-time error in the program. Try block followed by catch block

Q9 b. Explain the following methods of Thread class:- (8)

(i) Join (ii) Resume (iii) Sleep (iv) Spinwait

Ans9b. members of thread class – start, abort, suspend, resume, join, is Alive, priority.

TEXTBOOK

I. Programming in C# - A Primer, E. Balagurusamy, Second Edition, TMH, 2008