BCACAC 157

Credit Based Second Semester B.C.A. Degree Examination, April/May 2014
(New Syllabus) (2012-13 Batch Onwards)
OBJECT ORIENTED PROGRAMMING USING C++

Time : 3 Hours   Max. Marks : 80

Note : *Answer **any ten** questions from Part – **A** and **one full** question from **each** Unit of Part – **B**.*

PART – A

1. a) List any four areas for the application of OOPs.   (10×2=20)

   b) Explain the use of setw and setprecision manipulators.

   c) Compare while and do.. while loop.

   d) What are default arguments ? When it is needed ?

   e) What are const member functions ?

   f) Differentiate between functions and member functions in C++.

   g) What are default constructors ?

   h) List the C++ operators that can't be overloaded.

   i) Give the general form of operator function.

   j) Differentiate between the base class and the derived class.

   k) What is late binding ?

   l) What is abstract class ?

PART – B

Unit – I

2. a) State any five principal advantages of object oriented programming.

   b) What is symbolic constant ? Explain the different methods of defining symbolic constants in C++.

   c) Explain different forms of if statement in C++ with syntax.   (5+5+5)

3. a) Explain any two special operators in C++.

   b) Explain basic data types supported by C++.

   c) Explain the different types of expressions in C++.

P.T.O.

d) Evaluate the following :

   i) $k = (a > b)$? $((a > c)$? $a : c) : (b > c)$? $b : c$) (Assume $a = 5, b = 6, c = 8$).

   ii) $x = + + x * y + z - -$ (Assume $x = 5, y = 2, z = 7$).   **(4+4+5+2)**

Unit – II

4. a) Explain the concept of function overloading with an example.

   b) Explain call by value with an example.

   c) Explain how objects are passed as arguments to the function with an example.

   d) Give any two properties of friend function.   **(4+4+5+2)**

5. a) Explain different ways of defining member functions of a class with an example.

   b) Write a program to add and subtract two complex numbers using friend functions.

   c) Explain the usage of static data members with an example.   **(5+5+5)**

Unit – III

6. a) What are the characteristics of a constructor ?

   b) Write a C++ program to compare two strings using operator overloading techniques.

   c) Write a note on :

     i) copy constructors   ii) Destructors.   **(4+5+6)**

7. a) Explain the concept of overloading the constructor with an example.

   b) Explain how to overload a unary operator with an example.

   c) Explain class to basic type conversion with an example.   **(5+5+5)**

Unit – IV

8. a) Explain multiple inheritance technique with a code example.

   b) List any five rules used with virtual function.

   c) Write a note on constructors in derived class.   **(5+5+5)**

9. a) Explain public mode of inheritance with example.

   b) Write a note on compile time and run time polymorphism.

   c) What is pure virtual function ? How does it differ from normal function ?

   d) Explain order of execution of constructions in inheritance with an example.

                                        (5+3+4+3)