2012

Time : 3 hours

Full Marks : 80

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from both the Groups as directed.

Group – A

(Objective Type Questions)

Answer all questions : 2×10 = 20

1. Choose the correct answer of the following :

(a) Which of the following loop causes the execution of the code at least once ?

(i) While

(ii) Do.........while

(iii) For

(iv) While.........do

CX – 7/4 (Turn over)
(b) Operator overloading is called:
   (i) Complex overloading
   (ii) Runtime overloading
   (iii) Compile time overloading
   (iv) Runtime overloading

(c) If a subclass contains a method with the same name and arguments as in the base class, it is:
   (i) Overloading
   (ii) Polymorphism
   (iii) Overriding
   (iv) Error

(d) Inheritance is a way to:
   (i) Improve data hiding and encapsulation
   (ii) Create general classes from specific classes
   (iii) Create specific classes from general classes
   (iv) None of the above

(e) Size of void pointer is:
   (i) 0 byte

CX - 7/4 (2) Contd.
(ii) 2 byte
(iii) 4 byte
(iv) 8 byte

(f) A process of a class contain object of another class is called:
   (i) Nesting
   (ii) Data abstraction
   (iii) Encapsulation
   (iv) Friend

(g) ios represents:
   (i) A base class
   (ii) A stream
   (iii) An object of constant
   (iv) A function of input-output stream

(h) Which of the operator cannot be overloaded?
   (i) delete
   (ii) +
   (iii) ?
   (iv) New

CX – 7/4 (3) (Turn over)
(i) In C++, arguments can be passed in function by:

(i) Values
(ii) Reference
(iii) Address
(iv) All of the above

(i) :: (scope resolution) operator is used to:

(i) Define external variable
(ii) Associate function with class
(iii) (i) is true
(iv) (i) and (ii) are true

Group – B

(Long-answer Type Questions)

Answer any four questions:

2. (a) What are the static member variable and function? Write a program to count number between 20 to 120, which are not divisible by first three even numbers.

8

CX – 7/4 ( 4 ) Contd.
3. (a) What are the advantages and disadvantages of inheritance? 
(b) Write a program to create an array of string. Read and display the string using constructor and destructor?

4. (a) Describe the different access modifiers in C++. Explain with example.
(b) Explain hierarchical inheritance.

5. (a) What is template class? List the merits and demerits of using a template in C++.
(b) Explain the concept of operator overloading? Illustrate with suitable examples.

6. (a) Write a program to concatenate two string using with or without operator overloading?
(b) Differentiate between early and late binding?

CX - 7/4 (5) (Turn over)
7. (a) Write a program to add two complex number. You must create a class that has following functionality:

(i) Overloaded constructor to accept real and imaginary data
(ii) Destructor to destroy object
(iii) Overloaded + operator to add two complex object.
(iv) Display function to display each complex number.

(b) Explain encapsulation and abstraction with examples.

8. (a) What is exception? Write a program to demonstrate the use of try catch block to handle exception.

(b) What is OOPS? How it differs from procedural oriented programming?

9. (a) Explain virtual function: Write down all the rules with respect to virtual function.

(b) Write a program to create a class employee that contains name, id and address. Use

CX - 7/4

(6) Contd.
dynamic constructor and dynamic destructor
to add or remove records dynamically. 7

10. (a) What is stream? Define Input Stream and
Output Stream hierarchy. 8

(b) What are constant object? How they are
declared? 7

11. (a) What is File? What are the steps involved
in manipulating a file in C++ program? 8

(b) Write a function using reference variable as
arguments to swap the values of a pair of
characters. 7