Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/BCA/SEM-4/BCA-402/2013

2013

OBJECT ORIENTED PROGRAMMING WITH C++

Time Allotted : 3 Hours *Full Marks* : 70

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : $10 \times 1 = 10$

i) Friend function cannot overload ..... operator.

a) ++ b) *

c) = = d) +

ii) Which of the following enables the code reusability ?

a) Function overloading b) Inheritance

c) Exception handling d) Template.

iii) Which operator cannot overload ?

a) + b) ?

c) ++ d) –

iv) The static member function can manipulate only on

a) Global data b) Local data

c) Private data d) Static data.

v) Function Overloading is an example of

a) Runtime polymorphism

b) Compile time polymorphism

c) Pointer to a constant

d) None of these.

vi) Template is used for

a) Memory space

b) Programming language

c) Variable value

d) Variable address.

vii) Constructor can return value

a) Not always true b) Always true

c) Never true d) None of these.

viii) When a function call itself is called

a) Inline function b) Virtual function

c) Recursive function d) None of these.

ix) To make any value constant in C++ we use

a) Statical b) Const

c) Virtual d) all of these.

x) Which one of the following is an access specifier ?

a) Private b) Virtual

c) Static d) None of thses.

xi) Namespace is a

a) Declarative Region b) Virtual Class

c) Property of C++ d) None of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. When do we make a virtual function "public" ? What are the implications of making a function pure virtual function ?
3. Bring out the difference between classes and structures in C++.
4. What is pointer arithmetic ? How is it performed ? Support your answer with an example.
5. Neatly explain constructor and destructor with suitable examples.
6. What is manipulator ? What do you mean by type cast operator ? What is copy constructor ?

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. a) Differentiate between macros and functions. 5

   b) When should one use references, and when should I use pointers ? 5

   c) Explain Function overloading with simple examples. 3

   d) What do you mean by new and delete operators ? 2

8. a) What is the order that local objects are destructed ? 5

   b) What is the significance of access specifiers in a class ? 3

   c) Explain the role of file iostream.h in C++. 3

   d) Explain the difference between prefix and postfix incremental operator. 4

9. a) What is File handling in C++ ?

   b) What is Stream Class ? Describe the stream class levels in C++ with the diagram.

   c) What is the difference between private and public member variables ?

   d) Define Friend class with an example. 3 + 2 + 3 + 2 + 5

10. a) What are the differences of C and C++ ? What is Class in C++ ?

    b) What do you mean by data hiding and data abstraction and how is it implemented in C++ ? 4 + 2 + 2 + 7

11. Write a short note on any *three* of the following : 3×5

    a) Template Class

    b) Abstract Class

    c) Operator Overloading

    d) Sequential and Random Access file.

    e) Overloading of [] operator.