Name : ....

Roll No. : ....

Invigilator's Signature : ....

CS/BCA/SEM-4/BCA-402/2012

2012

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 the following :

$$10 \times 1 = 10$$

i)   The static member function can manipulate only on

    a)   Global data   b)   Local data

    c)   Private data   d)   Static data.

ii) At the time of compilation, the function body is actually inserted in case of

    a)   normal function   b)   inline function

    c)   friend function   d)   virtual function.

iii) The ability of a function or operator to act in different ways on different data types is called

    a)   data hiding   b)   encapsulation

    c)   polymorphism   d)   data abstraction.

iv) Which of the following operators cannot be overloaded by friend function ?

a) +   b) <

c) =   d) /

v) To convert from a basic type to a user-defined class, you would most likely use

a) a built-in conversion function

b) a one-argument constructor

c) an overloaded = operator

d) a conversion function that's a member of the class.

vi) void f (int a, int b, int c) ;

Which of the following statements is true ?

a) Default value for argument b can be set if and only if argument c also has a default value

b) Default value for argument b can be set if and only if argument a also has a default value

c) Default value for argument b can be set if and only if both arguments a and c have default values

d) Default value for argument b can be set even if neither argument a nor argument c have default value.

vii) A friend function can be used to

a) avoid arguments between classes

b) allow one class to access an unrelated class

c) increase the versatility of an overloaded operator

d) both (b) and (c).
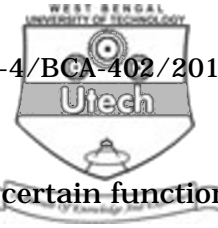
viii) Scope resolution operator usually

    a)   limits the visibility of variables to a certain function

    b)   specifies a particular class

    c)   resolves ambiguities

    d)   both (b) and (c).

ix) Exception Handling handles

    a)   compilation time error

    b)   run time error

    c)   both (a) and (b)

    d)   neither (a) nor (b).

x) An inline function executes .... than a normal function, but requires .... memory.

    a)   slower, more   b)   faster, less

    c)   faster, more   d)   slower, less.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.   3 × 5 = 15

2. Can we overload a construction ? Explain.

3. What is message binding ? When do we use it ? Explain with example.

4. What is copy constructor ? Explain with an example.

5. What is operator overriding ? Explain with an example.

6. What are the differences between procedure oriented language and object oriented language ?

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following.   3 × 15 = 45

7. a) What is Operator overloading ?   5

   b) Define a class string. Use overloaded + operator to concatenate two strings.   10

8. a) What is Template ? What is function template ? Write a program showing the use of function template.

   b) What is this pointer ?

9. a) What is *static data member* ? Explain with the help of an example.   7

   b) What are the different forms of inheritance ? Give an example for each.   8

10. a) What is the difference between opening a file with a constructor function and opening a file with open( ) ? When is one method preferred over the other ?   7

    b) Write a program that reads a text file and creates another file that is identical to it.   8

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

    a) Scope resolution operator

    b) Exception handling

    c) Abstract class

    d) Stream

    e) Data hiding.

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