

Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/BCA/SEM-4/BCA-402/2010  
2010.**

**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) Reusage of a function is also called
- a) Method overriding      b) Function overriding  
c) Function overloading      d) None of these.
- ii) The argument of a copy constructor is passed by
- a) Value      b) Reference  
c) Pointer      d) Both (a) and (c).
- iii) A template provides a convenient way to make a family  
of
- a) variables      b) function  
c) classes      d) programs.

4075

{ Turn over



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**GROUP - B**

**( Short Answer Type Questions )**

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

2. Can we overload a destructor ? Explain.
3. What is dynamic binding ? When do we use it ? Explain with example.
4. What are the differences between a structure in C and a class in C++ ?
5. What is a constructor ? Explain copy constructor with an example.
6. What is function overloading ? Explain with a simple example.

**GROUP - C**

**( Long Answer Type Questions )**

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

7. What do you mean by Object-Oriented Programming ? Discuss the different properties of an Object-Oriented Programming.  $3 + 12$
8. What is template ? Why is it used ? Describe different templates.  $5 + 10$

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9. Construct a stack data structure by using a template class.

Explain containership with suitable examples. What is the difference between static polymorphism and dynamic polymorphism ?

6 + 4 + 5

10. Write a C++ program to implement a class called "String" for string manipulation. Overload +=, + and = operator, for string append, concatenation and assignment respectively.

5 + 5 + 5

11. Write short notes on any *three* :

3 × 5

- a) Multiple inheritance
- b) Exception handling
- c) Operator overloading
- d) Pure virtual function
- e) Stream.