Mid-West University

Examinations Management Office

End-Semester Examinations -2080

Bachelor level / B.E. Computer / 2nd Semester — Full Marks: 50
Time: 3 hours — Pass Marks: 25
Subject: Object Oriented Programming (CO421/CO503)

- *Attempt all the questions*
- *Figures in the margin indicate full marks.*
- *Assume suitable values, with a stipulation, if necessary.*
- *Candidates are required to answer the questions in their own words as far as possible.*

1. What do you mean by OOP? Relate object and class. List out features of C++. **[1+1+2]**

2. a. Write the number of steps involved between writing and executing a C++ program with the help of a figure. **[3]**

b. What is the difference between cerr and clog? Explain with a suitable program. **[3]**

c. How do you use set precision() method in a C++? Explain. **[3]**

3. a. Write a program that assign and print the roll number, phone number and address of two students having names "Ravi" and "Kumar" respectively by creating two objects of the class ' classStudent ' **[3]**

b. Why default constructor is necessary before using parameterized constructor? Explain **[2]**

c. What will happen if you declare a member of a class as static? Explain with a suitable example. **[2+1]**

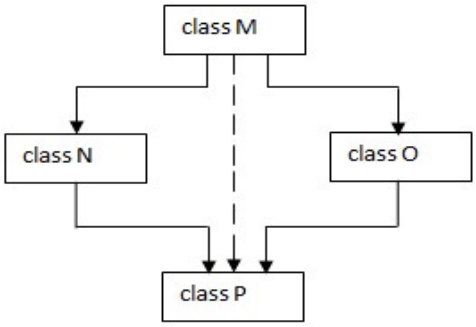
4. a. What is the need of operator overloading? What are the rules for operator overloading? Explain. **[1+2]**

b. What do you mean by unary operator overloading? Write a C++ program to perform the addition and subtraction of two complex numbers using the binary (+) and (-) operator. **[1+2]**

c. Why do we need data conversion? Write a C++ program to convert primitive type (int num) to user defined type (class Complex). **[1+2]**

5. a. What is the difference between function overriding and function overloading? Explain with suitable example. **[2+1]**

b. What is constructor invocation? How does the given figure relate to ambiguity problem? Suggest the detailed solution. **[1+2]**



6. a. Why is a non-virtual member function of a base class always called even when the base class pointer is pointing to the derived class object? **[2]**

b. What is the relation between pure virtual function and abstract class? Give a suitable example. **[1+1]**

7. a. Draw a sketch to show the different streams available in C++. **[2]**

b. What do you know about fstream class? Write a C++ program that writes "object oriented programming" in a text file (write.txt). **[1+3]**

c. Write short notes (*any two*): **[4]**

i. Control statements

ii. Destructor

iii. Binary Operator Overloading

iv. tellg() and tellp()

The End