Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)

Fourth Semester B. Tech. (CS/IT)

Summer – 2018

Course Code: CSU403

Course Name: Object Oriented Technology

Time: 2:30 Hr   Max. Marks: 60

Instructions to Candidate
1) All questions are compulsory.
2) Assume suitable data wherever necessary and clearly state the assumptions made.
3) Diagrams/sketches should be given wherever necessary.
4) Figures to the right indicate full marks.

1   **Attempt any two of the following**
  a Describe with example the mechanism of accessing   6
     data members and member functions in the ~~following~~
     ~~cases~~ various cases.

  b What is friend function? Explain with Example   6

  c Write a program to read two distances in feet and   6
     inches through two objects of class distance. Add two
     distances using function and display the added
     distance.

2 a How many arguments are required in the definition   6
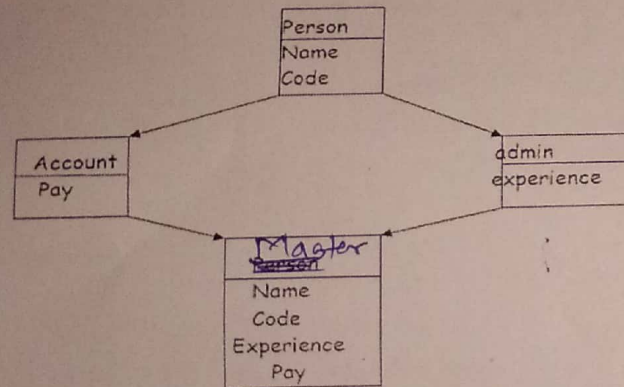   of an overloaded Binary Operators illustrate with
     program

   b Write C++ Program to display address of elements of 6
     an array using both array and pointers

Contd..

3 **Attempt any two of the following**

a When it is mandatory for the derived class to have 6
constructor? Write general form of defining derived
class constructor and order of execution of base class
constructor

b Consider a class network of the following figure. The 6
class master derives information from both account
and admin classes which in turn derives information
from the class person. Define all the four classes and
write a program to create, update and display the
information contained in master objects.

c How ambiguity can be resolve in multiple 6
inheritance, when function with same name appear in
more than one base class? Explain with example

4 **Attempt any two of the following**

a How is polymorphism achieved at run time? Explain 6
with example

b What does this pointer point to? Explain with 6
Example

c Create a base class called shape. Use this class to 6
store two double type values that could be used to
compute the area of figures. Derive two specific
classes called triangle and rectangle from the base
shape. Add to the base class, a member function
get_data() to initialize base class data members and
another member function display_area() to compute
and display the area of figures. Make display_area()
as a virtual function and redefine this function in the
derived classes to suit their requirements

5 a What is the difference between opening a file with a 6
constructor function and opening a file with open()
function? When is one method preferred over the
other?

b Distinguish between the terms class template and 6
template class. Explain with example