

SUBJECT CODE NO:- P-500
FACULTY OF ENGINEERING AND TECHNOLOGY
S.E. (CSE/IT) Examination MAY/JUNE-2016
Object Oriented Programming Using C++
(Revised)

[Time: Three Hours]

[Max Marks:80]

“Please check whether you have got the right question paper.”

N.B

- i) Q.No.1 from section A and Q.No.6 from section B are compulsory.
 ii) Solves any two questions from the remaining questions from each section
 iii) Assume suitable data, if necessary

Section A

- Q.1 Solve any five 10
- a) What are the features of OOPS?
 b) How do we define member function outside the body of class?
 c) Write any four rules for overloading operators.
 d) Describe propose of protected access specifier in C++.
 e) Can we have more than two constructor in a class? If yes, explain the need for such situation.
 f) What is the importance of friend function?
 g) What does inheritance means in C++? Describe syntax of single inheritance?
 h) What is output of following code
- ```
include <iostream.h>
Class Test
{
 float i;
 Public:
 Test (float x) {i=x;};
 Friend void display (Test & x1);
};
Void display (Test & x1) {cout<<x1.i<<endl;}
int main()
{ Test t1 (10.1);
 Display (10.1);
};
```
- Q.2 a) Define a class to represent bank accounts include the following members , data members 08
- i) name Of depositor  
 ii) accounts number  
 iii) types of account  
 iv) Balance amount.
- Member function
- i) to initialize value  
 ii) to deposit an amount  
 iii) to withdraw an amount  
 iv) display name & balance
- b) Write a program to illustrate use of static data members. 07
- Q.3 a) Explain parameterized constructor with suitable example. 08  
 b) Write a program in C++ to overload binary + operator for complex number addition. 07

|        |                                                                                   |    |
|--------|-----------------------------------------------------------------------------------|----|
| Q.4 a) | Explain public and private derivation.                                            | 07 |
| b)     | Write a program to create class student and implement concept of array of object. | 08 |
| Q.5    | Write short note                                                                  | 15 |
| i)     | Inline function                                                                   |    |
| ii)    | Data hiding                                                                       |    |
| iii)   | Recursive function                                                                |    |
| iv)    | Scope resolution operator                                                         |    |

**Section B**

|        |                                                                                       |    |
|--------|---------------------------------------------------------------------------------------|----|
| Q.6    | Solve <u>any five</u> question                                                        | 10 |
| a)     | When do we make a virtual function “pure”?                                            |    |
| b)     | List some important manipulator function.                                             |    |
| c)     | Why is it necessary to include file iostream “in C++ program”?                        |    |
| d)     | What is difference between early and late binding?                                    |    |
| e)     | Define containers?                                                                    |    |
| f)     | What does “current position” mean when applied to files?                              |    |
| g)     | Elaborate concept of overriding.                                                      |    |
| h)     | What do you mean by stream?                                                           |    |
| Q.7 a) | Write a program to demonstrate the concept of virtual base class?                     | 08 |
| b)     | What is a file mode? Describe various file mode option available.                     | 07 |
| Q.8 a) | Explain the mechanism to initialize base class members from derived from constructor. | 07 |
| b)     | Write a program for exception. Use try block and catch block.                         | 08 |
| Q.9 a) | Write a program to read text file and perform following operation                     | 07 |
| 1.     | Display count of character in file                                                    |    |
| 2.     | Display count of new line in file                                                     |    |
| b)     | Write a program to illustrate concept of Hybrid inheritance.                          | 08 |
| Q.10a) | Explain                                                                               | 08 |
| 1.     | Abstract class                                                                        |    |
| 2.     | Virtual function                                                                      |    |
| b)     | Write a program using template concept to implement queue.                            | 07 |