

**SUBJECT CODE:- 229**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**S.E. (CSE/IT) Examination Nov/Dec 2015**  
**Object Oriented Programming Using C++**  
**(Revised)**

[Time: Three Hours]

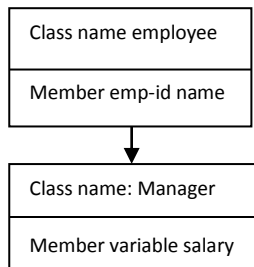
[Max. Marks: 80]

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

- N.B
- i) Question No 1 from section A and Question No 06 from section B are compulsory.
  - ii) Solve any two questions from each section from remaining questions.
  - iii) Assume suitable data if necessary

## Section A

- Q.1 Solve any five 10
- a) What are the different types of constructor?
  - b) What is the importance of Destructor?
  - c) Define reference variable.
  - d) What is data hiding?
  - e) Why cout and Cin are not considered as keyword?
  - f) When the memory is allocated to an object? How ?
  - g) Write any four characteristics of friend function.
  - h) Identify the error in following
- ```
#include<iostream.h>
int fun ()
{
    return 1;
}
float fun().
{ return 10.23;
void main()
{
    cout <<(int) fun ()<< ' ';
    cout <<(float) fun ()<< ' ';
}
}
```
- Q.2 a) Explain in detail 08
- i. Data Abstraction & Encapsulation
  - ii. polymorphism
- b) Discuss advantages , disadvantages & limitations of inline function. 07
- Q.3 a) Write a program for addition of two complex numbers overload '+' binary operator using friend function 08
- b) WAP for function over loading in c++ 07
- Q.4 a) WAP to demonstrate use of static data members and static member function. 08
- b) Write a program to implement inheritance shown below. Assume suitable member function. Create two object 07



|           |                                                                                                                                  |    |
|-----------|----------------------------------------------------------------------------------------------------------------------------------|----|
| Q.5       | a) Explain multiple inheritance with suitable example.                                                                           | 08 |
|           | b) What are the differences between inheriting a class with public & private visibility mode. What is significance of protected. | 07 |
| SECTION-B |                                                                                                                                  |    |
| Q.6       | Solve any five                                                                                                                   | 10 |
|           | a) When do you make a class virtual?                                                                                             |    |
|           | b) Can a member function in derived class have same name as that of one in base class?                                           |    |
|           | c) What do you mean by exception?                                                                                                |    |
|           | d) What does "this" Pointer point to?                                                                                            |    |
|           | e) Define template.                                                                                                              |    |
|           | f) What is abstract class.                                                                                                       |    |
|           | g) Discuss role of file ( )function                                                                                              |    |
|           | h) State the errors of any in the following statement                                                                            |    |
|           | i.    cout <<(void*) amount;                                                                                                     |    |
|           | ii.   cout << width();                                                                                                           |    |
| Q.7       | a) Write a c++ program that illustrate how to achieve runtime polymorphism using virtual function.                               | 08 |
|           | b) Write a c++ program to show use of constructor in single level inheritance                                                    | 07 |
| Q.8       | a) Explain concept of pure virtual function with example                                                                         | 08 |
|           | b) Write a program to illustrate the concept of exception handling.                                                              | 07 |
| Q.9       | a) Explain stream classes and stream class hierarchy for input /output                                                           | 08 |
|           | b) Write a program for virtual base class operation.                                                                             | 07 |
| Q.10      | a) Write a c++ program to read a file name and display the content of file on screen                                             | 08 |
|           | b) Write a short note on "I/O manipulation"                                                                                      | 07 |