

SRM UNIVERSITY, KATTANKULATHUR
Faculty of Engineering and Technology
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
CYCLE TEST-II
15SE102J-OBJECT ORIENTED PROGRAMMING
SET-A

Year & Semester: II/III
Time: 8.50AM-10.30AM

Date: 12-9-16
Max. Marks: 50

PART-A (5X4 = 20 Marks)

Answer all

1. List down the differences between overloading and overriding.
2. List down the various types of inheritance with suitable examples
3. Identify and judge the error in the following program.

```
#include<iostream.h>
class Space
{
    int mCount;
public:
    space()
    {
        mCount=0;
    }
    Space operator++()
    {
        mCount++;
        return space(mCount);
    }
}

void main()
{
    space obj;
    obj++;
}
```

4. What is a destructor? What is its purpose and when it is invoked?
5. What is a virtual base class and when do we use it?

PART-B (3 x 10 = 30 Marks)

Answer ANY THREE Questions

6. Define a class to represent a bank account. The data members are account no, customer name, balance, amount. Create a constructor in such a way the balance should be rs.500 when a new account is created. Overload + operator for credit and - operator for debit.
7. Create a class Employee with data members emp_no, emp_name, designation. Derive a class qualification from employee that has data members UG, PG and experience. Create another class salary derived from both the classes. To display the details of employee and compute their increment based on their experience and educational qualification
8. An educational institution wishes to maintain a database of its employees. The database is divided into a number of classes. Staff code and staff name have to be stored in staff class. Staff has three divisions' teacher, typist and officer. Teacher stores subject and publication, Typist stores speed and officer stores grade. Typist is divided into two classes regular and casual. Casual stores daily wages. Specify all the classes and define the modules using friend function to create the data base and retrieve individual information as and when required.
9. Write a program consists of a base class and a derived class. The base class data members are name, roll no, and sex. The derived class data members are height and weight. The derived class has been declared as an array of class objects. The member functions are used to get information on the derived class from the keyboard and display the contents of the array of class objects on the screen.