

SYMBIOSIS INTERNATIONAL UNIVERSITY



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Institute: (0701) SYMBIOSIS INSTITUTE OF TECHNOLOGY, PUNE

Programme: (070121) B.TECH
Computer Science ,Information Technology

Batch: 2013-17

Semester: III

Course: Programming Paradigms

Course Code: 0701210302CS , 0701210302IT

Date: 13/12/2014

Maximum Marks: 45

Day: Saturday

Time: 01:30 pm - 03:00 pm

Instructions:

1. All Questions from PART- A are compulsory.

PART A

Q.1 a. What are the unique advantages of Object Oriented programming? 2

b. Point out the errors, if any in the following code. 2

```
class sample
{
    private :
        int t1, t2;
    public :
        sample (int x, int y)
        {
            t1=x;
            t2=y;
        }
        void display ()
        {
            Cout<<endl<<t1<<t2;
        }
};
void main ()
{
    sample s1(2, 3), s2;
    s1.display ();
    s2.display ();
}
```

c. State characteristic of friend function.

2

- d. What is the difference between the type of values returned by following two functions ? 2
1. `int &fun1(void);`
 2. `const int &fun2(void);`

Q.2 Choose right option for the following 2

1. Which of the following statement is not valid for operator overloading
 - a) Only existing operators can be overloaded
 - b) The overloaded operators follow the syntax rules of original operator
 - c) None of the above
2. If a class C derived from class B which is derived from class A, all through public inheritance then class C Member function can access
 - a) Private data in A and B
 - b) protected data in A and B
 - c) protected and public data only in C
3. A static function
 - a) should be called when an object is destroyed
 - b) can be called using the class name and function name
 - c) is used when dummy object must be created
4. A library function `exit()` causes an exit from
 - a) The loop in which it occurs
 - b) The program in which it occurs
 - c) The function in which it occurs

- Q.3**
- a. What kind of operators are used to format data display in C++? Explain. 2
 - b. Write a C++ code to add two numbers by overloading an operator. 3
 - c. Can a class be both derived as well as base? Explain with suitable example. 3

PART B

- a. How can access specifier get affected due to inheritance? Explain with neat labeled diagram. 6
- b. Write a note on Procedural languages. 4

Write a C++ program to generate mark sheet of three students which illustrates flow of execution of constructor and destructor when one class is derived from more than one base class. Represent the particular diagram and write down the output of a program. 10

Solve any one from the following 7

- a. What is pure virtual function? Explain with one example.
- b. What is mean by overload an operator? Discuss need of operator overloading.