OBJECT ORIENTED PROGRAMMING LAB

Lab-task#10

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Answer the questions (i) and (iii) after going through the following class:

```
class Seminar
{
int time;
public:
Seminar()
//Function 1
{
time = 30;
cout << "Seminar starts now" << endl;
}
void lecture()
//Function 2
{
cout << "Lectures in the seminar on" << endl;
}
Seminar(int duration)
//Function 3
{
time = duration;
cout << "Seminar starts now" << endl;
}
~Seminar()
//Function 4
{
cout << "Thanks" << endl;
}
};
```

i . Write statements in C++ that would execute Function 1 and Function 3 of class Seminar.

Ans:-

```
Seminar s1;    // Execute function 1
Seminar s2(20);  //Execute function 3
```

ii. In Object Oriented Programming, what is Function 4 referred as and when does it get invoked/called?

Answer:- It is known as a Destructor , when scope of the object is get over Destructor is called.

iii. In Object Oriented Programming, which concept is illustrated by Function 1 and Function 3 together?

Answer:- Together function1 and function3 illustrated the concept of Polymorphism which is sometimes known as Constructor Overloading.

Question#2:- Answer the questions (i) and (ii) after going through the following class:

```
class Test
{
        char paper[20];
        int marks;
public:
        Test ()    // Function 1
        {
                strcpy (paper, "Computer");
                marks = 0;
        }
        Test (char p[])    // Function 2
        {
                strcpy(paper, p);
                marks = 0;
        }
        Test (int m)    // Function 3
        {
                strcpy(paper,"Computer");
                marks = m;
        }
        Test (char p[], int m)    // Function 4
        {
                strcpy (paper, p);
                marks = m;
        }
};
```

i. Write statements in C++ that would execute Function 1, Function 2, Function 3 and Function 4 of class Test.

Ans;-

```
Test t1;  // Execute function 1
Test t2("English"); // Execute function 2
Test t3(50); // Execute function 3
Test t4("Maths",49); // Execute function 4
```

ii. Which feature of Object Oriented Programming is demonstrated using Function 1, Function 2, Function 3 and Function 4 together in the above class Test?

Ans:- Again here is concept of constructor overloading(polymorphism).

Question#3:-3. Consider the definition of the following class:

```
class Sample
{
private:
	int x;
	double y;
public :
	Sample(); //Constructor 1
	Sample(int); //Constructor 2
	Sample(int, int); //Constructor 3
	Sample(int, double); //Constructor 4
};
```

i. Write the definition of the constructor 1 so that the private member variables are initialized to 0.

Ans:-

```
sample :: Sample()
{
	x = 0;
	y = 0;
}
```

ii. Write the definition of the constructor 2 so that the private member variable x is initialized according to the value of the parameter, and the private member variable y is initialized to 0.

Ans:-

```
Sample :: Sample(int a)
{
x = a;
      y = 0;
}
```

iii. Write the definition of the constructors 3 and 4 so that the private
member variables are initialized according to the values of the parameters.

Ans:-

```
Sample :: Sample(int a, double b)
{
      x = a;
      y = b;
}
```