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CLASS :   BSE(2A).

ROLL NO :   20P-0079.

SUBJECT :   OPP LAB.

ASSIGNMENT 10.

QUESTION 1.

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.

    int main(){

       Seminar s1;

       Seminar s2=Seminar(6);

       }

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

    ANS.

    Fucntion 4 is referred as destructor. Destructor is a member function of a class with same name as constructor with a symbol(~) and it is executed automatically when objects of a class are destroyed.

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

       Function 1 and 3 are called as constructors. A constructor is a member function having same name as that of class and it is executed when

object of class is created. Constructor can be both parameterized and non-parametrized.

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.

int main(){

    char c[ ]={"Englih"};

    Test t1;

    Test t2=Test(c);

    Test t3=Test(60);

    Test t4=Test(c,50);

}

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.

Constructor overloading feature is used.

QUESTION 3.

```
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;

}

int main(){

   Sample s1;

}

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;

}

```
int main(){

    Sample s1(3);

}
```

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,int b){

  x=a;

  y=b;

}

Sample ::Sample(int a,double b){

  x=a;

  y=b;

}


int main(){

  Sample s1(3,4),s2(3,4.4);

}
```