



INDIAN SCHOOL DARSAIT DEPARTMENT OF ICT



Subject: Computer Science

Topic: Constructor & Destructor

Worksheet No.:5

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Date:_____

Name of the Student : _____

Class &Div: XII _

Roll Number : ____

Answer the questions after going through the following class:

1. Answer the questions (i) and (ii) after going through the following class :

```
class BUS{
private:
char Pname[30],TicktNo[20];
float Fare;
public:
BUS() //function 1
{
strcpy(Pname,"\0");
strcpy(TicktNo,"\0");
Fare=0;
}
void Details() //function 2
{
cout<<Pname<<endl<<TicktNo<<endl<<Fare<<endl;
}
BUS(char * name, char *tno, float N); //function 3
BUS(BUS &F); // function 4 };

```

- i) In OOP, what is function 3 referred to as? Also define this function.
- ii) Define function 4 and write about its purpose?
- iii) In OOP, what is function 1 referred to as? Also define this function.
- iv) Write the C++ statement to call fuction3.

```
2. 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<<"Vote of thanks"<<endl; }
};

```

- i) What is Function 1 referred as? When does it get invoked?
- ii) What is Function 3 referred as? Write a function call to invoke it.
- iii) What is Function 4 referred as and when does it get invoked/called?
- iv) Write the definition of a copy constructor for class Seminar.
- v) Consider the following snippet:

```
void main()
{
    Seminar s1;
    s1.Lecture();
    getch();
}
```

- vi) In Object Oriented Programming, which concept is illustrated by Function 1 and Function 3 together? Write an example illustrating the calls for these functions

```
3. class fiction{
    long fcode;
    char ftitle[20];
    float fprice;
public:
fiction() //member function 1
{
    cout<<"bought"<<endl;
    fcode=100;strcpy(ftitle,"noname");fprice=50;
}
fiction(int c,char t[],float p) // member function 2
{
    fcode=c;
    strcpy(ftitle,t);
    fprice=p;
}
void increase(float p) // member function 3
{
    fprice+=p;
}
void show() // member function 4
{
    cout<<fcode<<": "<<ftitle<<": "<<fprice<<endl;
}
~fiction() // member function 5
{
    cout<<"fiction removed!" <<endl;
} };
void main() //line 1
{ //line 2
    fiction f1,f2(101,"dare",75); //line 3
    for (int i=0;i<4;i++) //line 4
    { //line 5
        f1.increase(20);f2.increase(15); //line 6
        f1.show();f2.show(); //line 7
    } //line 8
} //line 9
```

- i) Which specific concept of object oriented programming out of the following is illustrated by Member Function 1 and Member Function 2 combined together?
- ii) What is member function 1 referred as and when does it get invoked?
- iii) Out of the following which call is correct for member function 2?

```
fiction(12,"Movies",14.5);
fiction("Movies",14.5);
```
- iv) Write statement to invoke member function1.
- v) Write statement to invoke member function3.
- vi) Write statement to invoke member function4.
- vii) How many times the message "Fiction removed!" will be displayed after executing the above C++ code? Out of Line 1 to Line 9, which line is responsible to display the message "Fiction removed!"?

4. class WORK

```
{
int WorkId; char WorkType;
public:
~WORK() //Function 1
{
cout<<"Un-Allocated"<<endl;
}
void Status() // Function 2
{
cout<<WorkId<<":"<<WorkType<<endl;
}
WORK() // Function 3
{
WorkId=10; WorkType="T";
}
WORK (WORK &W) ; // Function 4
};
```

- i) Which member function out of Function 1, Function 2, Function 3 and Function 4 shown in the above definition of class Work is called automatically, when the scope of an object gets over? What is it called as?
- ii) WORK W; //Statement 1
WORK Y(W); // Statement 2
Which member function out of Function 1, Function 2, Function 3 and Function 4 shown in the above definition of class Work will be called on execution of statement written as Statement 2? What is this function specifically known?
- iii) Write the complete definition of Function 4
- iv) Write a statement to invoke function 2.

5. Give the output of the following code:

```
class play
{
public:
play()
{
calculate();
void calculate()
{
show();
cout<<"calculating";
}
void show()
{
cout<<"welcome in C++";
}
};
void main()
{
play one;
}
```

6. Give the output of the following code:

```
class Calc {
char Grade;
int Bonus;
public:
Calc() {Grade='E';Bonus=0;}
void Down(int G)
{
Grade-=G;
}
Void Up(int G)
{
Grade+=G;
Bonus++;
}
void Show()
{
cout<<Grade<<"#"<<Bonus<<endl;
}
};
void main()
{
Calc c;
C.Down(2);
C.Show();
C.Up(7);
C.Show();
C.Down(2);
C.Show();
}
```

7. Give the output of the following code:

```
class Stock {
    long int ID;
    float Rate;
    int Date;
public:
    Stock(){ID=1001;Rate=200;Date=1;}
    void RegCode(long int I,float R)
    { ID=I; Rate=R; }
    void Change(int New,int DT)
    { Rate+=New; Date=DT; }
    void Show()
    {
        cout<<"Date :"<<Date<<endl;
        cout<<ID<<"#"<<Rate<<endl;
    } };
void main() { Stock A,B,C;
A.RegCode(1024,150);
B.RegCode(2015,300);
B.Change(100,29);
C.Change(-20,20);
A.Show(); B.Show(); C.Show(); }
```

8. Give the output of the following code:

```
class Class{
int Cno,total;
char section;
public:
Class(int no=1)
{
Cno=no;
section='A';
total=30;
}
void admission(int c=20)
{
section++;
total+=c;
}
void ClassShow()
{
cout<<Cno<<":"<<section<<":"<<total<<endl;
} };
void main(){
Class C1(5),C2;
C1.admission(25);
C1.ClassShow();
C2.admission();
C1.admission(30);
C2.ClassShow();
C1.ClassShow();}
```