



# INDIAN SCHOOL DARSAIT DEPARTMENT OF ICT



**Subject:** Computer Science

**Topic:** Inheritance

**Worksheet No.:**6

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**Date:**\_\_\_\_\_

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**Class &Div:** XII \_

**Roll Number :**\_\_\_\_\_

**Consider the following class declaration and answer the questions that follow:**

```
1. class Publisher{
    char pub[12];
    double turnover;
protected:
    void register();
public:
    Publisher();
    void enter();
    void display();};
class Branch{
    char city[20];
protected:
    float employees;
public:
    Branch();
    void haveit();
    void giveit();};
class Author : private Branch, public Publisher
{
    int acode;
    char aname[20];
    float amount;
public:
    Author();
    void start();
    void show();
};
```

- i) Write the names of data members, which are accessible from objects belonging to class Author.
- ii) Write the names of all the member functions which are accessible from objects belonging to class Branch.
- iii) Write the names of all the members which are accessible from member functions of class Author.
- iv) How many bytes will be required by an object belonging to class Author?

```

2. class MNC
{ char Cname[25]; //Compay name
protected:
char Hoffice[25]; //Head office
public:
MNC();
char Country[25];
void EnterData();
void DisplayData();
};
class Branch:public MNC
{ long NOE //Number of employees
char Ctry[25]; //Country
protected:
void Association();
public:
Branch();
void Add();
void Show();
};
class Outlet:public Branch
{ char State[25];
public:
Outlet();
void Enter();
void Output(); };

```

- (i) Which class' constructor will be called first at the time of declaration of an object of class Outlet?
- (ii) How many bytes does a object belonging to class Outlet require?
- (iii) Name the member function(s), which are accessed from the object(s) of class Outlet.
- (iv) Name the data member(s), which are accessible from the object(s) of class Branch.

```

3. class Drug
{
char category[10];
char date_of_manufacture[10];
char company[20];
public:
Drug();
void enterdrugdetails();
void showdrugdetails();
};
class Tablet : public Drug{
protected:
char tablet_name[30];
char volume_label[20];
public:
float price;
Tablet();
void entertabletdetails();
void showtabletdetails ();};

```

```

class PainReliever : public Tablet
{
    int dosage_units;
    char side_effects[20];
    int use_within_days;
public:
    PainReliever();
    void enterdetails();
    void showdetails();
};

```

(i) How many bytes will be required by an object of class Drug and an object of class PainReliever respectively ?

(ii) Write names of all the data members which are accessible from the object of class PainReliever.

(iii) Write names of all the members accessible from member functions of class Tablet.

(iv) Write names of all the member functions which are accessible from objects of class PainReliever.

```

4. class Exterior
{
    int OrderId;
    char Address[20];
protected:
    float Advance;
public:
    Exterior();
    void Book(); void View();
};

```

```

class Paint:public Exterior
{
    int WallArea,ColorCode;
protected:
    char Type;
public:
    Paint();
    void PBook();
    void PView();
};

```

```

class Bill : public Paint
{
    float Charges;
    void Calculate();
public :
    Bill();
    void Billing();
    void Print();
};

```

- i) Which type of Inheritance out of the following is illustrated in the above example?
- ii) Name the data members accessed by object of class Bill.
- iii) Write the names of all the data members, which are directly accessible from the member functions of class Paint.
- iv) Write the names of all the member functions, which are directly accessible from an object of class Bill.
- v) What will be the order of execution of the constructors, when an object of class Bill is declared?

```

5. class film
{ int filmid ;
int filmname;
int leadroles
public:
char leadroleinmale[30];
char leadroleinfemale[30];
film( );
accept( );
display( );
};
class commercialfilm : public film
{ int no_of_songs;
float costpersong;
protected:
int typecode;
public:
char remake;
commercialfilm( );
acceptcomm( );
expenceansong( );
display( );
};
class artfilm : private film
{ char theme[50];
public:
artfilm();
acceptart( );
display( );
};

```

- i) Which type of Inheritance is shown in the above example?
- ii) What is the size of the object of class artfilm?
- iii) Which data members are accessible through the object of class artfilm?
- iv) Which class constructor will be called first at the time of declaration of an object of class artfilm?