



INDIAN SCHOOL DARSAIT DEPARTMENT OF ICT



Subject: Computer Science

Topic: Inheritance

Worksheet No.:6

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Class &Div: XII A

Roll Number :____

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

```
1. class PPP
{
    int H;
protected :
    int S;
public :
    void input (int);
    void out();
};
class QQQ : private PPP
{
    int T;
protected :
    int U;
public :
    void indata(int, int);
    void outdata();
};
class RRR : public QQQ
{
    int M;
public :
    void disp();
};
```

- i) Name the base class and derived class of the class QQQ.
- ii) Name the data member(s) that can be accessed from function disp().
- iii) Name the member function(s), which can be accessed from the objects of class RRR.
- iv) Is the member function out() accessible by the object of the class QQQ?

```
2. 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?

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 FaceToFace

```
{
char CenterCode[10];
public:
void Input( );
void Output( );
};
```

class Online

```
{
char website[50];
public:
void SiteIn( );
void SiteOut( );
};
```

class Training: public FaceToFace, private online

```
{
long Tcode;
float charge;
int period;
public:
void Register( );
void show( );
};
```

- i) Which type of inheritance is shown in the above example?
- ii) Write names of all the member functions accessible from Show() function of class Training.
- iii) Write name of the entire member accessible through an object of class Training.
- iv) Is the function Output () accessible inside the function SiteOut()? Justify your answer?
- v) Write the statement to invoke Register () of Training.
- vi) How many bytes are occupied by an object of class Training.