**MCQ SECTION**

Q1. A

Q2. B  
Q3. C  
Q4. A

**CODING SECTION**

*PROBLEM STATEMENT1(5-MARKS)*

**#include <iostream>**

**using namespace std;**

**class student {**

**protected:**

**int roll, m1, m2;**

**public:**

**void get();**

**};**

**class extracurriculum {**

protected:

int xm;

public:

void getsm()

{

cin >> xm;

}

};

void student::get()

{

cin >> roll;

cin >> m1 >> m2;

}

class information : public student, public extracurriculum

{

int tot, avg;

public:

void display()

{

tot = (m1 + m2 + xm);

avg = tot / 3;

cout << "Roll No: " << roll << "\nTotal: "<< tot;

cout << "\nAverage: " << avg;

}

};

**int main()**

**{**

**information i;**

**i.get();**

**i.getsm();**

**i.display();**

**}**

*PROBLEM STATEMENT-2(10 MARKS)*

**#include<iostream>**

**#include<iomanip>**

**using namespace std;**

**class order**

**{**

**protected:**

**int size;**

**int \*item\_no;**

**double \*price;**

**double \*quantity;**

**public:**

**virtual void bill()=0;**

order(int n)

{

size=n;

item\_no=new int[size];

price=new double[size];

quantity=new double[size];

}

void get()

{

for(int i=0;i<size;i++)

{

cin>>item\_no[i];

cin>>price[i];

cin>>quantity[i];

}

}

};

class payment:protected order

{

protected:

double total\_bill=0;

public:

payment(int n):order(n)

{

get();

}

void bill()

{

cout<<"BILL:\n";

for(int i=0;i<size;i++)

{

cout<<"Item number:"<<item\_no[i]<<

"\nPrice:"<<quantity[i]\*price[i]<<endl;

}

for(int i=0;i<size;i++)

{

double temp;

temp=price[i]\*quantity[i];

total\_bill+=temp;

}

}

};

class COD:protected payment

{

public:

COD(int n):payment(n)

{

bill();

}

void display()

{

cout<<"Total bill:"<<total\_bill<<endl;

cout<<"keep the cash ready";

}

};

class card:protected payment

{

long int card\_no;

char card\_type;

public:

card(int n):payment(n)

{

cin>>card\_no;

cin>>card\_type;

}

void display()

{

bill();

cout<<"Total bill:"<<total\_bill<<endl;

cout<<"payment successful";

}

};

**int main()**

**{**

**int n;**

**int option;**

**cin>>option;**

**cin>>n;**

**if(option==1)**

**{**

**cout<<"you chose to pay by cash\n";**

**COD cod(n);**

**cod.display();**

**}**

**else if(option ==2)**

**{**

**cout<<"you chose to pay by card\n";**

**card c(n);**

**c.display();**

**}**

**return 0;**

**}**