Ques 1: Write a Program to Display name on screen using class?

Ans 1:

```
#include <iostream>
    using namespace std;
    class name {
       public:
        void display()    // display function
           {
           cout<<"I AM ROBIN TOMAR"<<endl;
           }
};
int main()
{
name obj1;
obj1.display();
return 0;
}
```

Ques 2: WAP to find area of circle using class?

Ans 2:

```
#include<iostream>
using namespace std;

class Test {
public:
   float r, area;

   void input() {
      cout << "Enter radius of a circle:";
      cin >> r;

   }
```

```
   void findArea() {
      area = 3.14 * r * r;
   }

   void display() {
      cout << "Area of circle is:" << area;
   }
};

int main() {

   Test obj;

   obj.input();
   obj.findArea();
   obj.display();

   return 0;
}
```

Ques 3: WAP to Find simple interest (si = p*r*t / 100) using class?

Ans 3:

```
#include <iostream >
using namespace std;
class simpleInterest {

        public:
                double p;
                double rate ;
                double time ;
                double si;
                void input()
                {
```

```
                cout<<"PLEASE ENTER THE PRINCIPLE AMOUNT";
                cin>>p;
            cout<<"PLEASE ENTER THE RATE OF INTEREST";
                cin>>rate;
                cout<<"PLEASE ENTER THE TIME DURATION";
                cin>>time;
}
    void calc()
    {
        si=p*r*t/100;

          }


        void display(){


                cout<<"YOUR SIMPLE INTEREST WILL BE "<<si<<endl;
        }


};

int main()
{
        simpleInterest  obj1;
        obj1.input();
        obj1.calc();
        obj1.display();
        return 0;
        }
```

Ques 4: WAP to check whether a person is male or female using class?

Ans 4:

```
#include<iostream >
using namespace std;
class findMaleOrFemale
{
        public:

                char gender;

                void input()
                {

                        cout<<"Please enter The Character M or F";
                        cin>>gender;

                }

                void calc ()
                {
                        if (gender=='m'||gender=='M')
                        {
                                cout<<"He is the male ";

                        }
                        else  if (gender=='f'||gender=='F')
                        {
                                cout<<"She is  Female ";
                        }
                        else{
                                cout<<"it is the invalid input";
                        }
                }
```

```
};
int main()
{
        findMaleOrFemale obj;
        obj.input();
        obj.calc();
        return 0;



}
```

Ques 5: WAP to Find salary of a person whose basic is greater than 20,000 and hra: 2%. In other case, hra: 1.2%.

Ans 5:

```
#include<iostream>
using namespace std;
class salary
{
        public:
                float sal;
                float hra;
                float basic;

                void input()
                {
                        cout<<"Please Enter Your  salary";
                        cin>>basic;

                }
                void find()
                {
                        if (basic>=20000)

                        {
                            sal=(basic*2)/100;
```

```
                }
                        else {
                                sal=(basic*1.2)/100;



                        }
                }

        void display()
        {
                cout<<" ......PLEASE FIND  SALARY DETAILS BELOW..... "<<endl;

                cout<<"You have Entered Your Basic Salary is =="<<basic<<endl;

                cout<<"Your HRA will be "<<sal<<endl;

                cout<<"Your total salary will be =="<<sal+basic<<endl;



        }
};
int main()
{
        salary obj1;
        obj1.input();
        obj1.find();
        obj1.display();
        return 0;


}
```

Ques 6: WAP to Find root of a quadratic equation. (if/else)

Ans 6:

```
#include<iostream>
#include<math.h>
using namespace std;
class root
{
        public:

float a, b, c, x1, x2, discriminant, realPart, imaginaryPart;

 void input()
 {

        cout<<"Enter coefficients A , B and C" ;
        cin>>a>>b>>c;

 }
        void calc()
         {
                discriminant = b*b - 4*a*c;

   if (discriminant > 0) {
      x1 = (-b + sqrt(discriminant)) / (2*a);
      x2 = (-b - sqrt(discriminant)) / (2*a);
      cout << "Roots are real and different." << endl;
      cout << "x1 = " << x1 << endl;
      cout << "x2 = " << x2 << endl;
   }

   else if (discriminant == 0) {
      cout << "Roots are real and same." << endl;
```

```
      x1 = -b/(2*a);
      cout << "x1 = x2 =" << x1 << endl;
   }

   else {
      realPart = -b/(2*a);
      imaginaryPart =sqrt(-discriminant)/(2*a);
      cout << "Roots are complex and different."  << endl;
      cout << "x1 = " << realPart << "+" << imaginaryPart << "i" << endl;
      cout << "x2 = " << realPart << "-" << imaginaryPart << "i" << endl;
   }
}
   };
   int main()
   {
         root obj;
         obj.input();
         obj.calc();
         return 0;

         }
```

Ques 7: Find whether the character entered is a vowel or a consonant.

Ans 7:

```
#include<iostream>
using namespace std;
class vowelOrConsonant
{
      public:
            char ch;

            void input()
            {
```

```
                cout<<"Please Enter The Character ";
                cin>>ch;
        }

        void calc()
        {
                switch(ch){
    case 'a':
   case 'e':
   case 'i':
   case 'o':
   case 'u':
   //check upper case vowel letters
   case 'A':
   case 'E':
   case 'I':
   case 'O':
   case 'U':
   cout<<ch<<" is a vowel";
   break;

    default:
    cout<<"it is the consonant";

                }

        }
};

int main(){
        vowelOrConsonant  obj;
        obj.input();
```

```
        obj.calc();
        return 0;


}
```

Ques 8: Find sequence of a protein as given below:

C = ccttaattaattccat

A = attcttcttc

T = ttatccta

Ans 8:

```
#include<iostream>
using namespace std;
class sequence
{
        public:
                char ch;

                void input()
                {
                        cout<<"Please Enter The  character  ";
                        cin>>ch;
                }

                void calc()
                {
                        switch(ch){
        case 'C':
                cout<<"ccttaattaattccat";
                break;
   case 'A':
        cout<<"attcttcttc";
        break;
   case 'T':
```

```
        cout<<"ttatccta";
    break;
        default:
        cout<<"it is not protien sequence ";









                        }

                    }




};

int main(){
        sequence  obj;
        obj.input();
        obj.calc();
        return 0;



}
```

Ques 9: Generate number from 1 - 100.

Ans 9:

```
#include<iostream>
using namespace std;
class forLoop
{
        public:
```

```
        int i;

        void dispaly(){

            for(i=0;i<=100;i++)
            {
                cout<<i<<endl;
            }


        }
};
int main(){

forLoop obj;
obj.dispaly();
return 0;
}
```

Ques 10: Display even number from 1 - 50 & find its sum.

Ans 10:

```
#include<iostream>
using namespace std;
class forLoop
{
    public:
        int i;
        int sum = 0;

        void dispaly(){

            while(i<=50)

{
```

```
if(i%2==0)

{ cout<<i<<endl;

sum+=i;

}

i++;

}
        cout<<"sum is ="<<sum<<endl;


                }
};
int main(){

forLoop obj;
obj.dispaly();
return 0;
}
```

Ques 11:WAP to find square of a number?

```
Ans 11: #include<iostream>
using namespace std ;
class square
{
        public:
                int i;
```

```
        float sq;
        void input()
        {

                cout<<"Please Enter any NO.";
                cin>>i;

        }
        void dispaly(){

                sq=i*i;
                cout<<"square of the no is ="<<sq<<endl;
        }
};
int main(){

square  obj;
obj.input();
obj.dispaly();
return 0;
}
```

Ques 12: Find sum of two numbers using function.

Ans12:

```
#include<iostream>
using namespace std ;
class sum
{
    public:
        float f,s;
        float su;
        void input()
        {
```

```
                cout<<"Please Enter First NO.";
                cin>>f;
                cout<<"please enter secont no.";
                cin>>s;

        }
        void dispaly(){
                su=f+s;

                cout<<"sum  of the two no is ="<<su<<endl;
        }
};
int main(){

sum obj;
obj.input();
obj.dispaly();
return 0;
}
```

Ques 13: WAP to Product of three numbers using function?

Ans13:

```
#include<iostream>
using namespace std ;
class product
{
    public:
        float f,s,t;
        float su;
        void input()
        {

                cout<<"Please Enter First NO."<<endl;
                cin>>f;
```

```
                cout<<"please enter secont no."<<endl;
                cin>>s;
                cout<<"please enter the third no"<<endl;
                cin>>t;
        }
        void dispaly(){
                su=f*s*t;

                cout<<"Product of the three no is ="<<su<<endl;
        }
};
int main(){

product obj;
obj.input();
obj.dispaly();
return 0;
}
```

Ques 14: WAP to Swap values of two variables using function.

Ans 14:

```
#include<iostream>
using namespace std ;
class swapValue
{
    public:
        float f,s;

        void input()
        {

                cout<<"Please Enter First NO."<<endl;
                cin>>f;
                cout<<"please enter second no."<<endl;
```

```
                cin>>s;

        }
        void dispaly(){
        swap(f,s);
                cout<<"After Swapping  first will be  ="<<f<<endl;
                cout<<"After Swapping  second will be  ="<<s<<endl;
        }
};
int main(){

swapValue obj;
obj.input();
obj.dispaly();
return 0;
}
```

Ques 15: WAP to find Area of a rectangle?

Ans 15:

```
#include<iostream>
using namespace std ;
class areaOfRectangle
{
    public:
        float f,s,a;

        void input()
        {

            cout<<"Please Enter length of the rectangle ."<<endl;
            cin>>f;
            cout<<"please enter breadth od the rectangle ."<<endl;
            cin>>s;
```

```
                }
                void dispaly(){
                a=f*s;
                cout<<"Area of the rectangle is ="<<a;

                }
};
int main(){

areaOfRectangle obj;
obj.input();
obj.dispaly();
return 0;
}
```