Q1. Input two variables of float type, assign sum to third variables print the sum. Calculate the addition, subtraction, multiplication & division in the same program, assign result to different variables to print their values on screen.
(Hint: - Use scanf(); function to input value from keyboard.

Program

```
#include"stdio.h"
#include"conio.h"

void main(void)

{

        float a,b,c,add,sub,multi,divide;

        clrscr();

        printf("\n\nPut the value of a = ");
        scanf("%f",&a);

        printf("\nPut the value of b = ");
        scanf("%f",&b);

        add=a+b;
        sub=a-b;
        multi=a*b;
        divide=a/b;

        printf("\n\nThe Additions of A + b = %.1f",add);
        printf("\n\nThe Subtraction of A - B = %.1f",sub);
        printf("\n\nThe Multiplication of A X B = %.1f",multi);
        printf("\n\nThe Dividion Of A / B = %.3f",divide);

        getch();

}
```

Q2. Evaluate following mathematical expressions:

I. $e = mc^2$

II. $x = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$

III. $y = x^2+b^2+c^2$

IV. $z = ax^2+bx+c$

Program

```
#include"stdio.h"
#include"conio.h"
#include"math.h"

void main(void)

{

        float e1,e,m,c,a,b,y,x;

        clrscr();

        printf("\t\n\nSolution of E=MC2 will be :-");

        printf("\n\n\nPut the value of m = ");
        scanf("%f",&m);

        printf("\nPut the value of c = ");
        scanf("%f",&c);

        e=m*(c*c);
        printf("\nThe result is %.1f",e);

        getch();

        clrscr();

                        //Part II

        printf("\t\n\nBy using Quadratic Equation solution will be");

        printf("\n\n\nPut the value of b = ");
        scanf("%f",&b);

        printf("\nPut the value of a = ");
        scanf("%f",&a);

        printf("\nPut the value of c = ");
        scanf("%f",&c);

        m=sqrt(b*b-4*a*c);

        e=-b+m/2*a;
        e1=-b-m/2*a;

        printf("\n\nThe 1st Result is %.1f",e);

        printf("\n\nThe 2nd Result is %.1f",e1);

        getch();
```

```
clrscr();

                //Part III

printf("\t\n\nThe solution of y=a2+b2+c2 is :-");

printf("\n\n\nPut the value of a = ");
scanf("%f",&a);

printf("\nPut the value of b = ");
scanf("%f",&b);

printf("\nPut the value of c = ");
scanf("%f",&c);

y=a*a+b*b+c*c;

printf("\n\nThe result would be %.1f",y);

getch();

clrscr();

                //Part IV

printf("\t\n\nThe solution of Z=ax2+bx+c is");

printf("\n\nPut the value of x = ");
scanf("%f",&x);

printf("\nPut the value of a = ");
scanf("%f",&a);

printf("\nPut the value of b = ");
scanf("%f",&b);

printf("\nPut the value of c = ");
scanf("%f",&c);

m=a*(x*x)+b*x+c;

printf("\n\n\nThe result would be %.1f",m);

getch();

}
```

Q3. Write a program to input an integer variables using scanf(); function. Calculate its square, cube & print the result.

Program

```
#include"stdio.h"
#include"conio.h"

void main(void)

{

        int a,b,c;

        clrscr();

        printf("\n\nPut a Value = ");
        scanf("%d",&a);

        b=a*a;
        c=a*a*a;

        printf("\n\nThe squre of the value is %d",b);

        printf("\n\nThe cube of the value is %d",c);

        getch();
}
```

Q4. Write a program to evaluate following expression & write the difference.

I. **x = ++a + b*c**
II. **y = a++ +b*c**

Program

```
#include"stdio.h"
#include"conio.h"

void main(void)

{

        int a,b,c,x,y;

        clrscr();

        printf("\n\nPut the value of a = ");
```

```
        scanf("%d",&a);


        printf("\nPut the value of b = ");
        scanf("%d",&b);

        x=++a+b*c;
        y=(a++)+b*c;

        printf("\n\n\nThe result of X=++a+b*c is %d",x);

        printf("\n\nThe result of Y=a++ +b*c is %d",y);

        getch();

}
```

Q5. Evaluate following relational expression and display result. By using scanf(); function assign value from keyboard.

I. **Y1 = (a==b) != c**
II. **Y2 = (a!=b)**
III. **Y3 = (a>=b)**
IV. **Y4 = (c==b==a)==10**

Program

```
#include"stdio.h"
#include"conio.h"

void main(void)

{

        int a,b,c,y1,y2,y3,y4;

        clrscr();

        printf("\n\nPut the value of a = ");
        scanf("%d",&a);

        printf("\nPut the value of b = ");
        scanf("%d",&b);

        printf("\nPut the value of c = ");
        scanf("%d",&c);

        y1=(a==b)!=c;
```

```
        y2=(a!=b);
        y3=(a>=b);
        y4=(c==b==a)==10;


        printf("\n\n\nThe result of Y1=(a==b)!=c is %d",y1);
        printf("\n\nThe result of Y2=(a!=b) is %d",y2);
        printf("\n\nThe result of Y3=(a>=b) is %d",y3);
        printf("\n\nThe result of Y4=(a==b==c)==10 is %d",y4);

        getch();

}
```

Q6. Write a program to input <=100 even value from keyboard by using scanf(); function & display all even numbers up to 100.

Program

```
#include"stdio.h"
#include"conio.h"

void main(void)

{

        int a,b;

        clrscr();

        printf("\n\nThe series of Even number is\n\n\n");

        printf("\nPut the Even value = ");
        scanf("%d",&b);

        for(a=b; a<=100; a+=2)
        printf(" %d",a);

        getch();

}
```

Q7. Write a program to input <=100 odd value from keyboard by using scanf(); function & display all odd numbers up to 99.

Program

```
#include"stdio.h"
#include"conio.h"
```

```
void main(void)

{



        int a,b;

        clrscr();

        printf("\n\nThe series of Odd number is\n\n\n");

        printf("\nPut the Odd value = ");
        scanf("%d",&b);

        for(a=b; a<=99; a+=2)
        printf(" %d",a);

        getch();

}
```

Q8. Write a program to generate following series:

I. **1 2 3 4 5. . . . . .100**
II. **2 4 6 8 10. . . . . .100**
III. **1 3 5 7 9. . . . . .100**

Program

```
#include"stdio.h"
#include"conio.h"

void main(void)

{

        int a,b,c;

        clrscr();

        printf("The series of real number is\n\n");
        for(a=1; a<=100; a++)
        printf(" %d",a);

        printf("\n\n\nThe series of even number is\n\n");
        for(b=2; b<=100; b+=2)
        printf(" %d",b);

        printf("\n\n\nThe series of odd number is\n\n");
```

```
        for(c=3; c<=100; c+=3)
        printf(" %d",c);

        getch();

}
```

Q9. Input a variables of type integer, & increment it by using ++ operator & print the result.

Program

```
#include"stdio.h"
#include"conio.h"

void main(void)

{
        int a;
        clrscr();

        for(a=1; a<=500; a++)
        printf(" %d",a);

        getch();

}
```

Q10. Input a variables of type integer, & increment it by using - - operator & print the result.

Program

```
#include"stdio.h"
#include"conio.h"

void main(void)

{
        int a;
        clrscr();

        for(a=500; a>=1; a--)
        printf(" %d",a);

        getch();

}
```