★ *PRACTICAL=28* ★

Aim:= Write a C program to use recursive calls to evaluate F(x) = x – x 3 / 3! + x5 / 5 ! – x 7 / 7! + … xn / n!

Filename :=recursive.c

```
#include<stdio.h>
#include<math.h>
float rec_call(int,int);
int fact(int);
int main()
{
int n,x;
float sum=0;
printf("\n Enter Value of X :");
scanf("%d",&x);
printf("\n Enter no of iteration n :");
scanf("%d",&n);
sum = rec_call(x,n);
printf("Sum = %f",sum);
return 0;
}
float rec_call(int x, int n)
{
static float sum;
if(n==1)
return sum+x;
if(n%2==0)
{
sum = sum - ((pow(x,(2*n)-1)*1.0) / fact((2*n)-1) ) ;
}
else
{
sum = sum + ((pow(x,(2*n)-1)*1.0) / fact((2*n)-1) ) ;
}
rec_call(x,--n);
```

```
}
int fact(int n)
{
if(n==1)
return 1;
return n * fact(n-1);
}
```

OUTPUT: