

C Programming

1. Write a C program to sum of

$$s = 1 + (1 + 2) + (1 + 2 + 3) + \dots + (1 + 2 + 3 + \dots + n)$$

Answer:

```
#include<stdio.h>
#include<conio.h>
main()
{
    int i, j, n, s, term;
    clrscr();
    printf("\n Enter the value to n:");
    scanf("%d", &n);
    s=0;
    for(i=1; i<=n; i++)
    {
        term=0;
        for(j=1; j<=i; j++)
        {
            term=term+j;
        }
        s=s+term;
    }
    printf("\n Sum of the series S=%d", s);
    getch();
    return 0;
}
```

2. Write a C program to find factorial of a given integer k.

Ans.

```
#include<stdio.h>
#include<conio.h>
main()
{
    int k, kfact, i;
    clrscr();
    printf("\n Enter the number:");
    scanf("%d", &k);
    kfact=1;
    for(i=1; i<=k; i++)
        kfact=kfact*i;
    printf("\n %d factorial is %d", k, kfact);
    getch();
    return 0;
}
```

3. Write a C program to generate and print Fibonacci series up to the term n with while loop.

Ans:

```
#include<stdio.h>
#include<conio.h>
main()
{
    int n; n1; n2; nt;
    clrscr();
    printf("\n Enter the final term of the series:");
    scanf("%d", &n);
    n1=0;
    n2=1;
    printf("%6d%6d", n1, n2);
    nt=n1+n2;
    while(nt<=n)
    {
        printf("%6d", nt);
        n1=n2;
        n2=nt;
        nt=n1+n2;
    }
    getch();
    return 0;
}
```