

NAME:- DUBEY KARAN SANJEEV  
CLASS:- B.E - 4  
ROLL NO:- 04  
BATCH:- A

#### EXPERIMENT 4

##### SOURCE CODE:

```
#include<stdio.h>
#include<conio.h>
void main()
{
float x[15],h[15],y[15],p[15];
int i,j,m,n;
clrscr();
printf("enter value for m:");
scanf("%d",&m);
printf("enter value for n:");
scanf("%d",&n);
printf("enter the value of x(n):");
for(i=0;i<m;i++)
{
scanf("%f",&x[i]);
}
printf("enter the value of h(n):");
for(i=0;i<n;i++)
{
scanf("%f",&p[i]);
}
for(i=m;i<=m+n-1;i++)
{
x[i]=0;
}
for(i=0;i<n;i++)
{
h[i]=p[n-1-i];
}
for(i=n;i<=m+n-1;i++)
{
h[i]=0;
}
for(i=0;i<=m+n-1;i++)
{
y[i]=0;
for(j=0;j<=i;j++)
{
y[i]=y[i]+(x[j]*h[i-j]);
}
}
for(i=0;i<m+n-1;i++)
{
printf("y[%d]=%f\n",i,y[i]);
}
getch();
}
```

## OUTPUT:

For autocorrelation

```
enter value for m:4
enter value for n:4
enter the value of x(n):1
2
1
1
enter the value of h(n):1
2
1
1
y[0]=1.000000
y[1]=3.000000
y[2]=5.000000
y[3]=7.000000
y[4]=5.000000
y[5]=3.000000
y[6]=1.000000
```

—

For crosscorrelation

```
enter value for m:4
enter value for n:4
enter the value of x(n):1
1
0
1
enter the value of h(n):4
-3
-2
1
y[0]=1.000000
y[1]=-1.000000
y[2]=-5.000000
y[3]=2.000000
y[4]=2.000000
y[5]=-3.000000
y[6]=4.000000
```

—