**Digital Signal Processing (DSP) Lab**

**Exp.4 Basic Operations of Discrete Time Sequence**

**%%EX))plot the following sequence:**

**%%x(n)={ 1, 0 ,[-3],-2,3}**

**clear all**

**close all**

**x=[ 1 0 -3 -2 3]**

**n=[-2 -1 0 1 2]**

**figure(1)**

**subplot(3,1,1)**

**stem(n,x,'b','linewidth',2)**

**axis([-3 3 -4 4])**

**xlabel('time')**

**ylabel('Amplitude')**

**title('x(n)={ 1,0 ,[-3],-2,3}')**

**%$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

1. **delay ( right shift ) operation of the sequence x(n-1) %%%%**

**%$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**m=n+1**

**subplot(3,1,2)**

**stem(m,x,'r','LineWidth',2);**

**axis([-7 7 -3 3])**

**xlabel('time')**

**ylabel('Amplitude')**

**title('delay ( right shift ) operation of the sequence x(n-1)')**

**%$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

1. **Advance ( left shift ) operation of the sequence x(n+1)**

**%$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**k=n-1**

**subplot(3,1,3)**

**stem(k,x,'r','LineWidth',2);**

**axis([-7 7 -3 3])**

**xlabel('time')**

**ylabel('Amplitude')**

**title('Advance ( left shift ) operation of the sequence x(n+1)')**

