EXP 1 ***BASIC SIGNAL GENERATION***

14/7/2014

AIM:

To generate the basic signals such as unit step,unit ramp,unit impulse,sinusoidal signal and exponential signal in Matlab.

PROGRAM:

UNIT STEP

clc;

clear all;

close all;

n=-5:5;

i=1;

for n=-5:5

if n>-1

y(i)=1;

else

y(i)=0;

end

i=i+1;

end

n=-5:5;

stem(n,y);

xlabel('n');

ylabel('u[n]');

title('UNIT STEP SIGNAL');

axis([-6 6 0 2]);



**RAMP SEQUENCE**

clc;

clear all;

n=-5:5;

i=1;

for n=-5:5

if n>0

y(i)=n;

else

y(i)=0;

end

i=i+1;

end

n=-5:5;

stem(n,y);

xlabel('n');

ylabel('r[n]');

title('RAMP SEQUENCE');

axis([-5 7 0 7]);



UNIT IMPULSE SIGNAL

clc;

clear all;

close all;

for n=-2:1:2

if n==0

y=ones(1);

stem(n,y);

xlabel('n');

ylabel('Amplitude');

title('UNIT IMPULSE');

axis([-2 2 0 2]);

end

end



SINUSOIDAL SIGNAL

clc;

clear all;

close all;

t=linspace(-2\*pi,2\*pi,100);

y=sin(t);

plot(t,y);

axis([-8 8 -2 2]);

title('SINE WAVE');

xlabel('n');

ylabel('Amplitude');



EXPONENTIAL SIGNAL

clc;

clear all;

close all;

x=0:0.01:5;

y=exp(x);

plot(x,y);

xlabel('n');

ylabel('a^n');

title('EXPONENTIAL SEQUENCE');



RESULT:

Thus,the basic signals have been generated in Matlab.