**LUCRARE 5**

**Lab 5 ex1:**

t=[0:0.02:2];

o=5;

z=0.6;

num=[o^2];

den=[1 2\*o\*z o^2];

step(num,den,t);

**Lab 5 ex2:**

num=conv([25],[0.4 1]);

den=conv([0.16 1],[1 6 25]);

t=[0:0.02:2];

step(num,den,t)

**Lab 5 ex3:**

t=[0:0.02:4];

Mv=0.4;

z=abs(log(Mv))/sqrt(pi^2+log(Mv)^2);

tv=0.8;

w=pi/(tv\*sqrt(1-z^2));

num=[w^2];

den=[1 2\*z\*w w^2];

step(num,den,t)

**Lab 5 ex4:**

z=0.001:0.001:1;

Mv=exp(-pi.\*z./sqrt(1.-z.^2));

plot(z,Mv)

**Lab 5 ex5:**

t=[0:0.1:2];

num1=[0 6];

den1=[1,2];

num2=[0 -4];

den2=[1 1];

[a,b]=parallel(num1,den1,num2,den2);

step(a,b,t)

**Lab 5 ex6:**

t=[0:0.1:2];

z=0.7;

w=4;

k1=sqrt(w);

k2=(2\*z\*w-2)/k1;

**Lab 5 ex7:**

m=[1 4 -7 -22 24];

n=[1 0 -4 20 24];

p=[1 10 35 50 24];

routh(m)

routh(n)

routh(p)