

```

clear all;

clc;

vin=12;

D=0.75;

L1=500e-6;

L2=500e-6;

C1=50e-6;

C2=50e-6;

C3=100e-6;

R=100;

IL1=1.08;

IL2=1.08;

VC1=vin/(1-D);

VC2=(2-D)*vin/(1-D);

VC3=((3-D)/(1-D))*vin;

a=[0 0 -(1-D)/(L1) 0 0; 0 0 0 (1-D)/(L2) -(1-D)/(L2); (1-2*D)/C1 -D/C1 0 0 0; D/C2 (-1+2*D)/C2 0 0
0; (1-D)/C3 0 0 0 -1/(R*C3)]

b=[IL1*(-2/C1-1/C3+1/C2); IL2*(2/C2-1/C1); VC1*(1/(L1)); VC2*(-1/(L2)); VC3*1/(L2)]

c=[0 0 0 0 1]

d=[0]

ulables=['d'];

ylables=['Vo'];

xlables=['iL1 iL2 vc1 vc2 vc3'];

printsys(a,b,c,d,ulables,ylables,xlables)

disp(['Transfer function in s-domain'])

disp(['Vo/d (s)'])

TFb=zpk(tf(ss(a,b(:,1),c,[0])))

```