**EEM-301 MATLAB PROJECTS - 2**

**3.2)**

**a)**

>> a1=[1 -0.8]

a1 =1.0000 -0.8000 >> b1=[2 0 -1]

b1 =2 0 -1

**b)**

a1=[1 -0.8]

b1=[2 0 -1]

[H,W]=freqz(b1,a1,4)

a1 =1.0000 -0.8000

b1 =2 0 -1

H =5.0000

2.8200 - 1.3705i

1.8293 - 1.4634i

0.9258 - 0.9732i

W =0

0.7854

1.5708

2.3562

**c)**

a1=[1 -0.8]

b1=[2 0 -1]

[H,W]=freqz(b1,a1,4,'whole')

a1 =1.0000 -0.8000

b1 =2 0 -1

H =5.0000

1.8293 - 1.4634i

0.5556

1.8293 + 1.4634i

W =0

1.5708

3.1416

4.7124

**4.2)**

**a)**

tau=0.01;

t = [0:tau:10-tau];

x= exp(-2\*abs(t));

**b)**

>> t=[0:0.01:(10-0.01)];

>> y=exp(-2\*abs(t-5));

>> N=10/0.01;

>> length(y)

ans =1000>> N

N =1000