

# CECS 463 System On Chip II

## FALL 2020



***Kuldeep Gohil***

***Assignment #03 – Discrete-time Fourier Transform***

***09/24/2020***

```
% Kuldeep Gohil
% CECS 463 Fall20
% Assignment #03 Due: 9/24/2020
```

```
%%6a
```

```
disp('(6a):');
a = [1,-0.95,0.9025];
b = [1,-1,1];
Q = 500; w = [-Q:1:Q]*(pi/Q);

H = freqresp(b,a,w);
magnitudeH = abs(H); angleH = angle(H);

figure(1); clf(1);
subplot(2,1,1);
plot(w/pi, magnitudeH); grid on; title('Magnitude Response');
xlabel('w/pi'); ylabel('magnitude H');

subplot(2,1,2);
plot(w/pi, angleH); grid on; title('Phase Response');
xlabel('w/pi'); ylabel('angle H');
disp(' ');
```

```
%%6b
```

```
disp('(6b):');
a = [1,-1.134,0.64];
b = [1,-1.7678,1.5625];
Q = 500; w = [-Q:1:Q]*(pi/Q);

H = freqresp(b,a,w);
magnitudeH = abs(H); angleH = angle(H);

figure(2); clf(2);
subplot(2,1,1);
plot(w/pi, magnitudeH); grid on; title('Magnitude Response');
xlabel('w/pi'); ylabel('magnitude H');

subplot(2,1,2);
plot(w/pi, angleH); grid on; title('Phase Response');
xlabel('w/pi'); ylabel('angle H');
disp(' ');
```