

Q2

```

s= tf("s");
A = ureal('A',0.7,'Range',[0.4,1]);
zeta = ureal('zeta',0.31,'Range',[0.02, 0.6]);
w = ureal('w',4100*2*pi,'Range',[4000*2*pi, 4200*2*pi]);
P_unc = 3.8 * 10^9 * (1/s^2 + A/(s^2+2*zeta*w*s+w^2));
P_unc = usample(P_unc, 100);
P_nom = (3.8*10^9)/s^2;
[P,info] = ucover(P_unc,P_nom,2);
WI_machine = info.WI;
WI_hand = (P_unc - P_nom)/P_nom;
bodemag(WI_machine, WI_hand)
legend("WI Machine", "WI Hand")

```

