**PD Controller:**

Clc;

Clear;

close all;

K = 10;

kp= 80;

ki= 0;

kd= 30;

num = K\*[kd kp ki];

den = [1 9 18 0];

open\_sys = tf(num,den);

closed\_sys = feedback(open\_sys,1);

step (closed\_sys,0:0.01:3);

stepinfo(closed\_sys)

ypd = step(closed\_sys,0:0.01:3);

sserror\_pd=abs(1-ypd(end))



**PI Controller:**

Clc;

Clear;

close all;

K = 10;

kp= 80;

ki= 180;

kd= 0;

num = K\*[kd kp ki];

den = [1 9 18 0];

open\_sys = tf(num,den);

closed\_sys = feedback(open\_sys,1);

step (closed\_sys,0:0.01:3);

stepinfo(closed\_sys)

ypi = step(closed\_sys,0:0.01:3);

sserror\_pi=abs(1-ypi(end))



**PID Controller:**

Clc;

Clear;

close all;

K = 10;

kp= 80;

ki= 150;

kd= 30;

num = K\*[kd kp ki];

den = [1 9 18 0];

open\_sys = tf(num,den);

closed\_sys = feedback(open\_sys,1);

step (closed\_sys,0:0.01:3);

stepinfo(closed\_sys)

ypid = step(closed\_sys,0:0.01:3);

sserror\_pid=abs(1-ypid(end))

