EEE302 CONTROL SYSTEMS
PRE-LABORATORY REPORT

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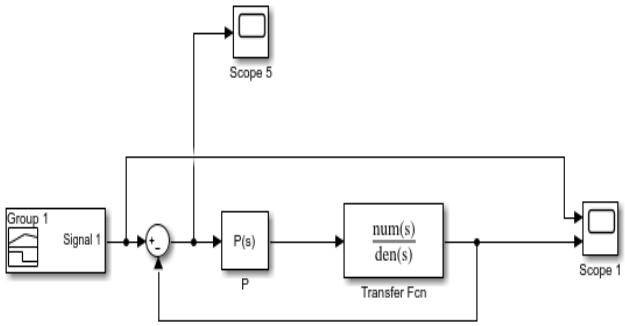
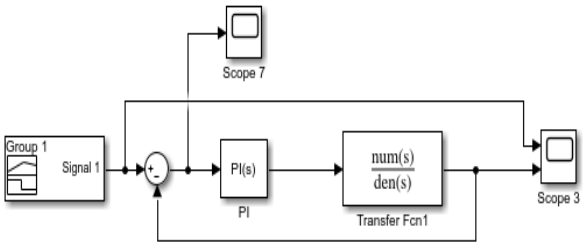
ASSIGNMENT NUMBER : 3

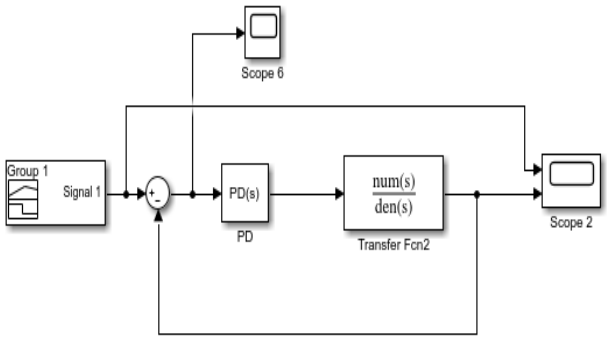
OBJECTIVES OF THE LABORATORY ASSIGNMENT:

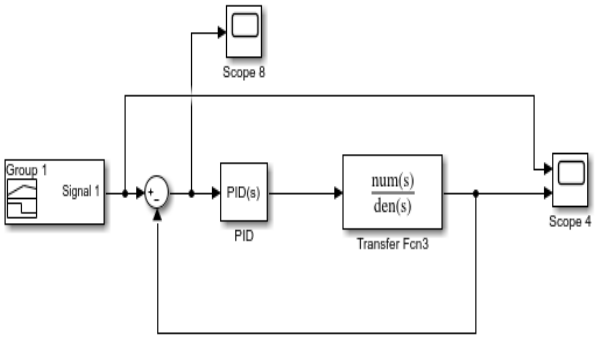
Objectives of this lab are learning and observing the changes of the control input and system output and comparing P, PD, PI and PID controller performances.

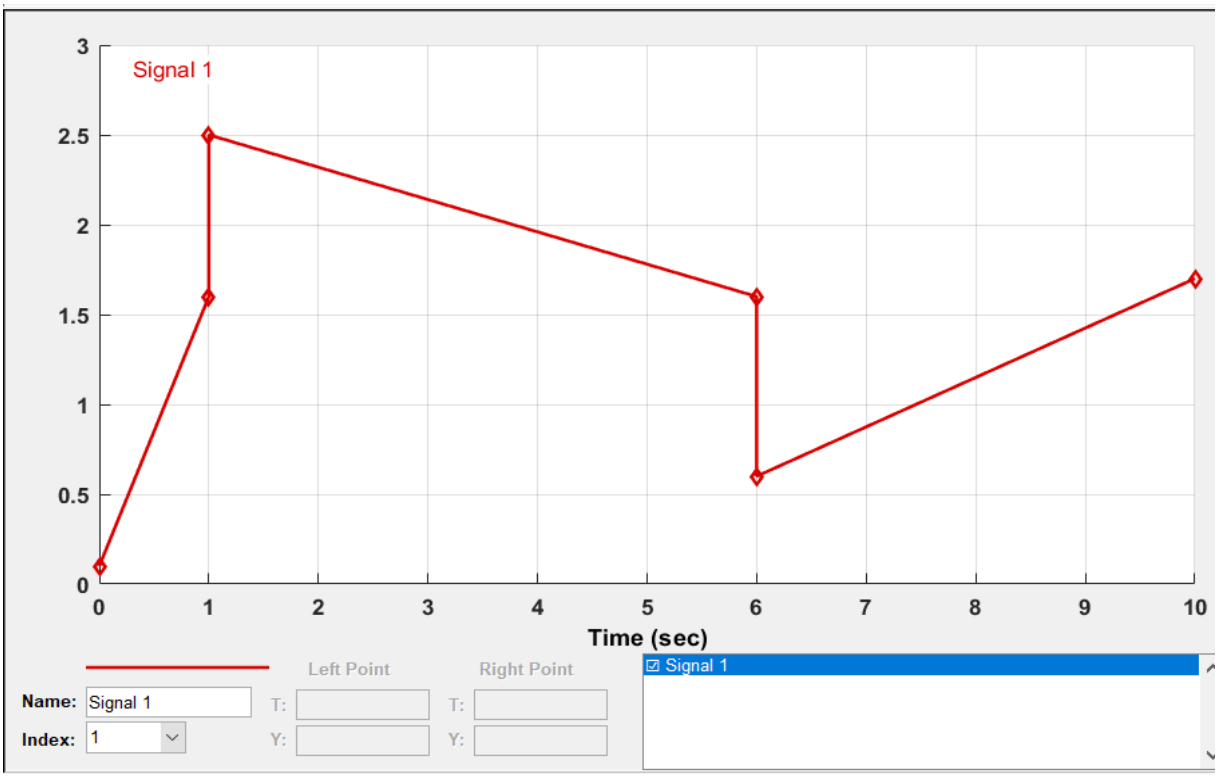
SIMULINK:



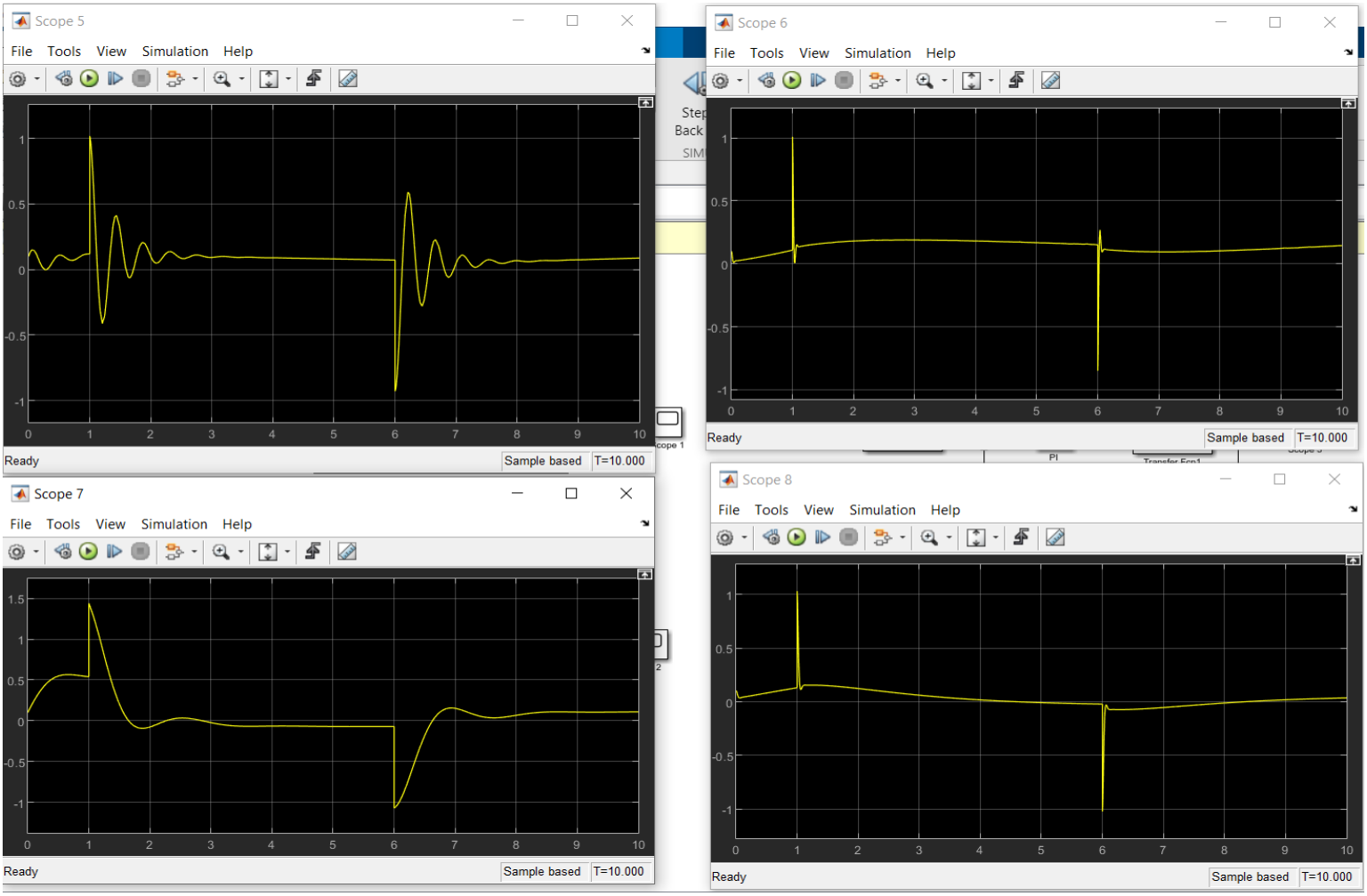




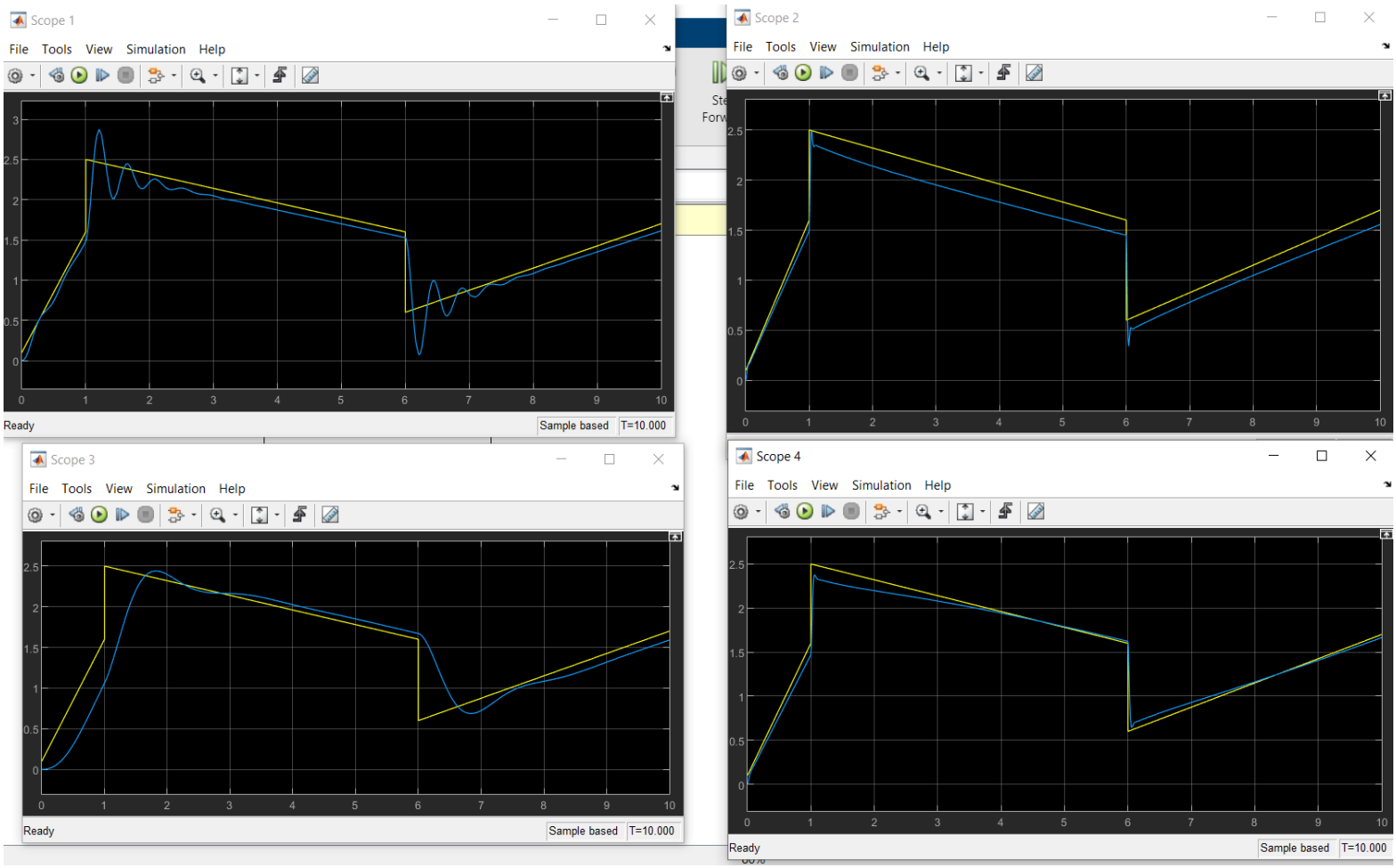




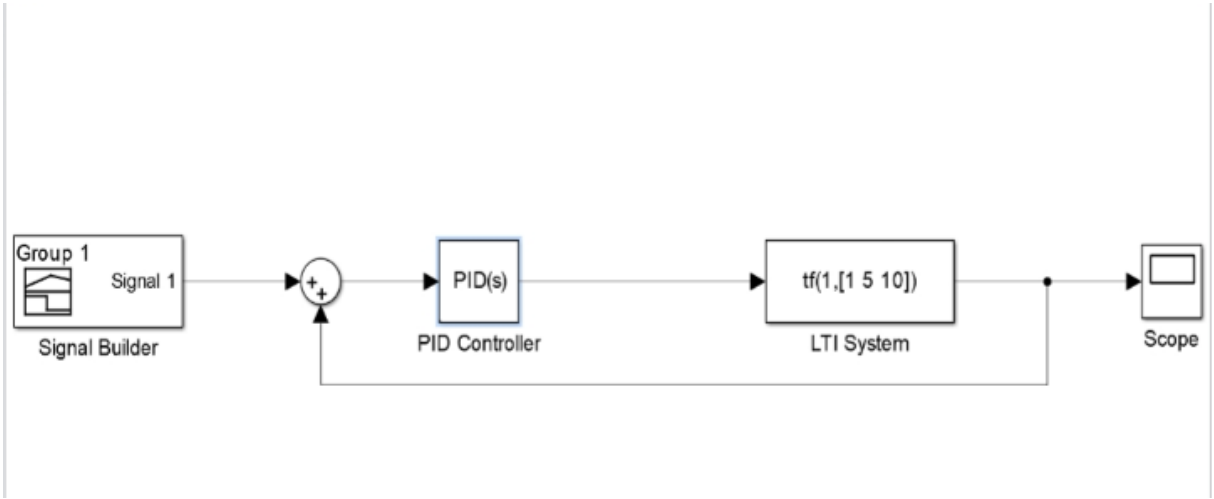
CONTROL INPUT:

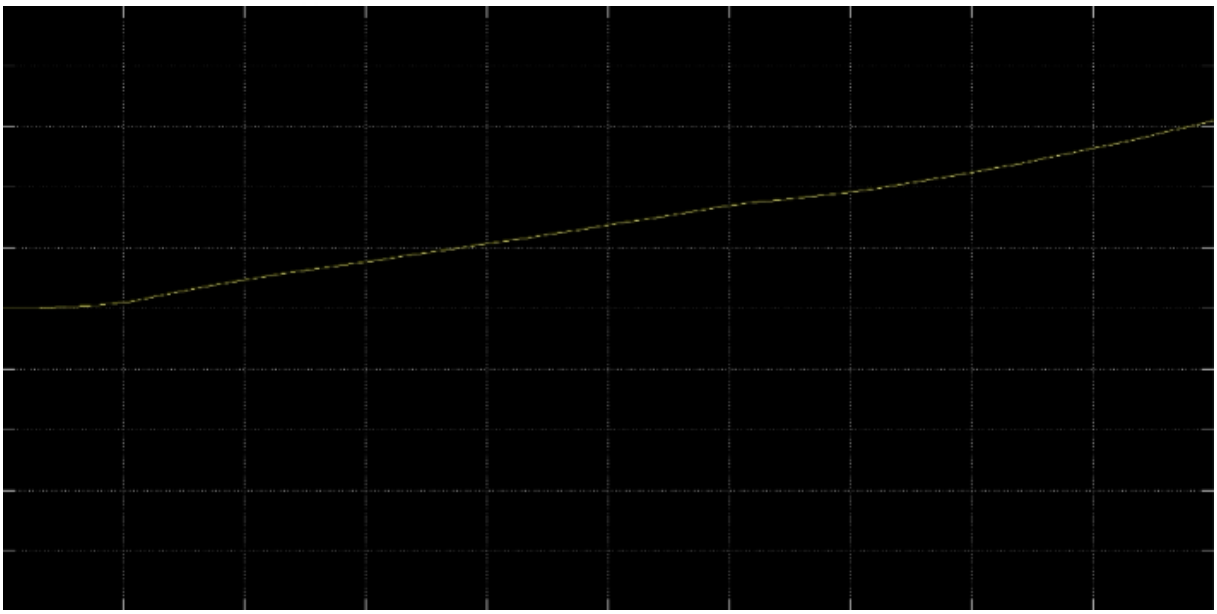


SYSTEM OUTPUTS:

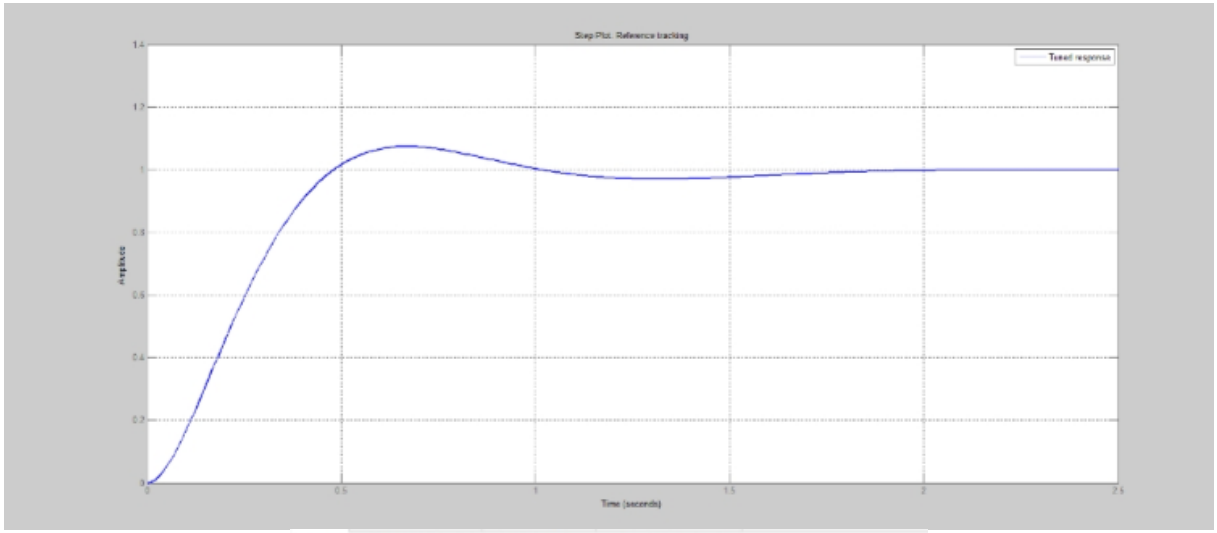


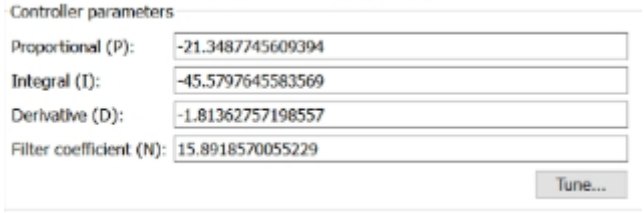
BY USING PID TUNER:

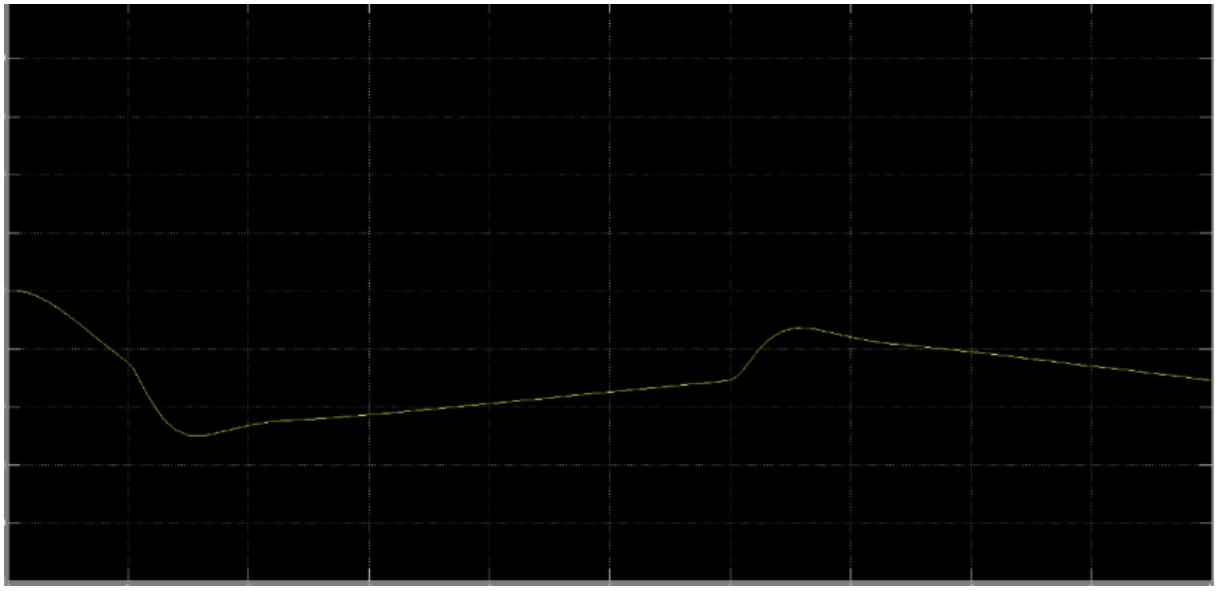


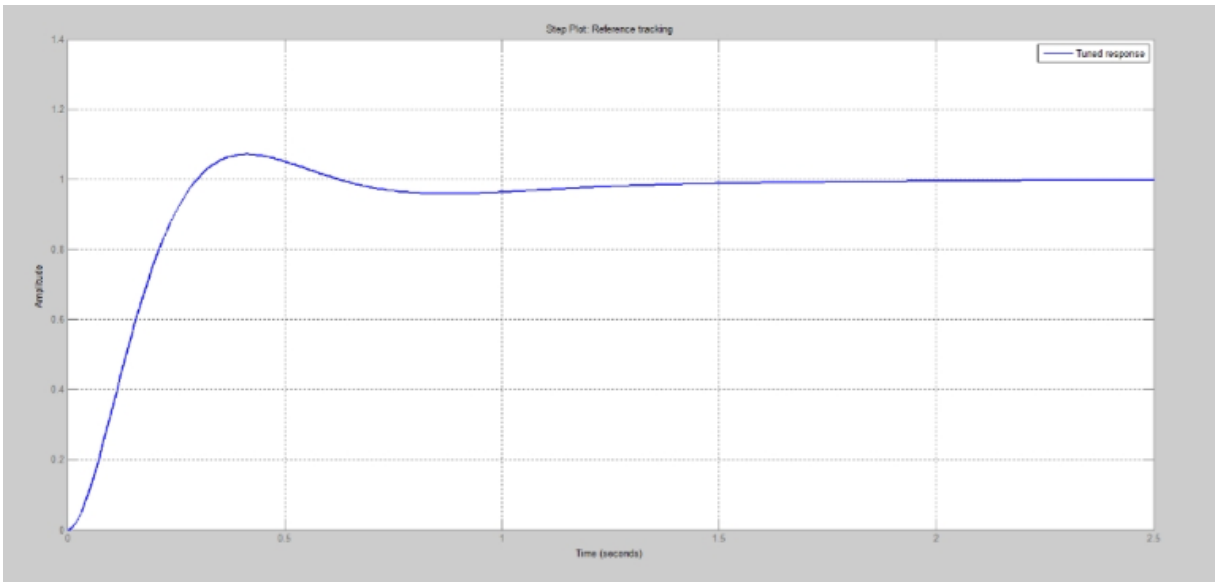


After Tuning





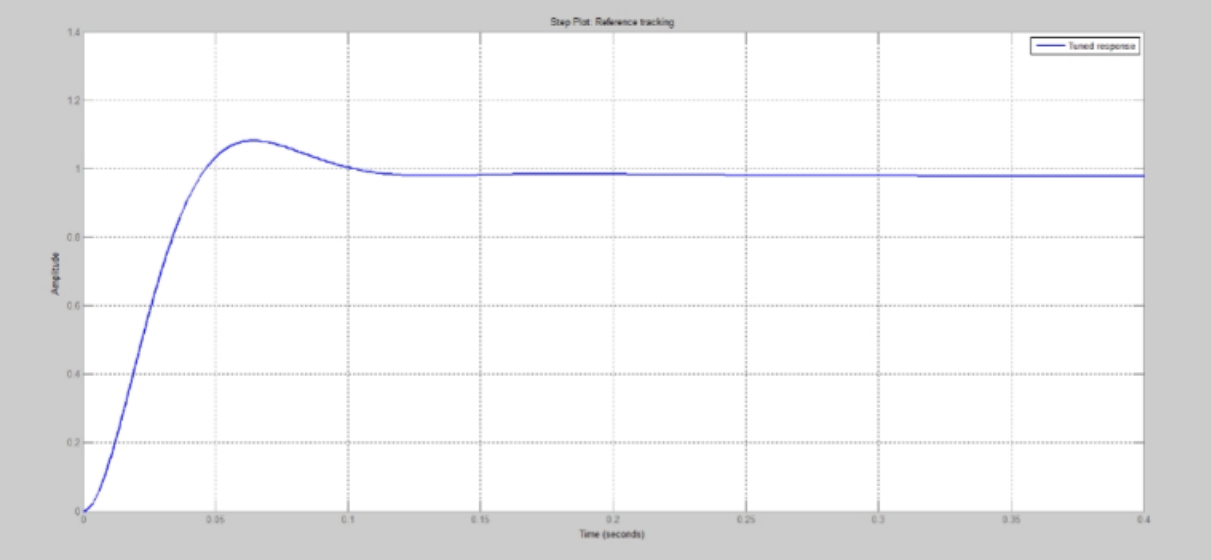




Controller parameters

Proportional (P):	-39.6667663607585
Integral (I):	-63.6599771396571
Derivative (D):	-4.0481605076386
Filter coefficient (N):	18.6923061230766

Tune...



From the Above figures of response of system obtained on updating PID coeffeffient using PIDtuning feature of controller along with hit and trail method for error the following observations can be summed up in table given below:

Respsonse time IN sec	P	I	D	N	OUTPUT CURVE
0.0459	-243.6	-153.5	-47	74.97	fastest response
0.2896	-39.66	-63.65	-4.04	18.692	faster response
0.459	-21.34	-45.57	1.813	15.89	best response
0.7274	-10.55	-26.6	-0.26	15	slow response
4.59	0	-4.4	0	100	slowest response