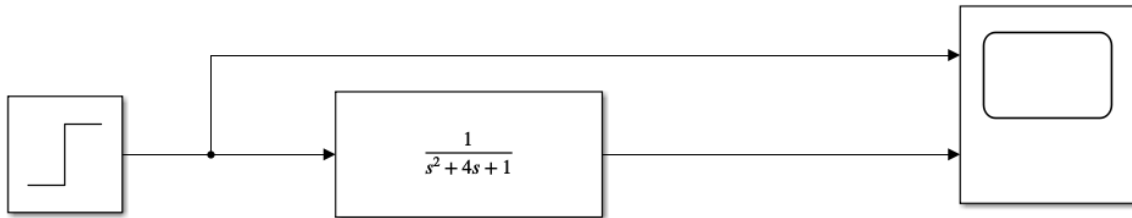


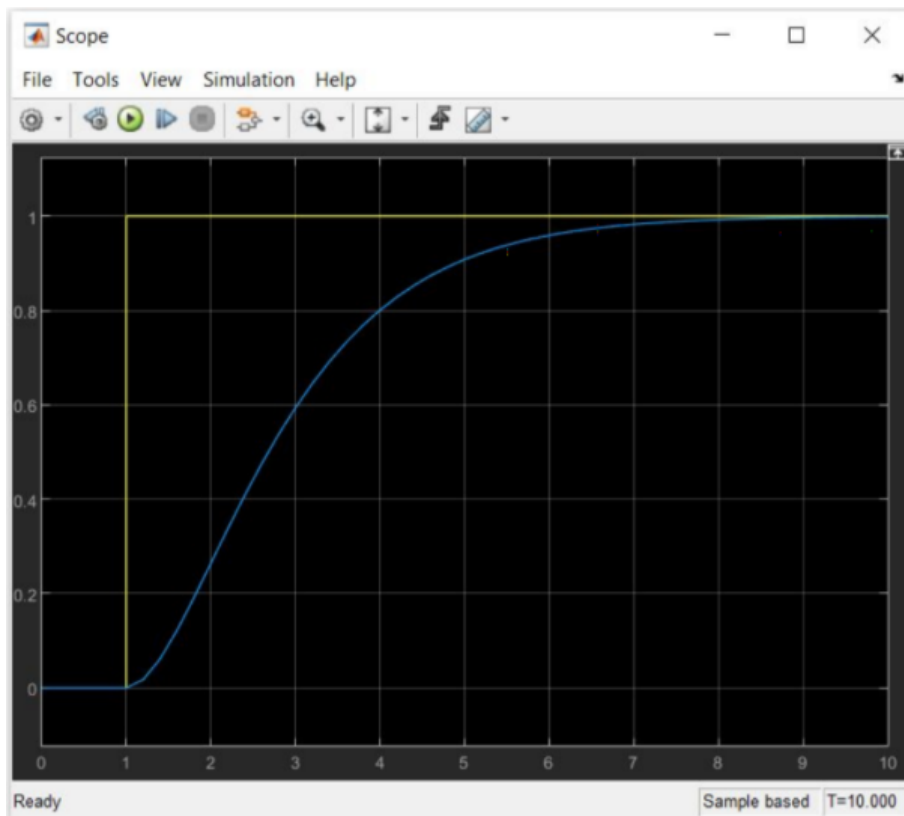
SIMULINK Model for First Experiment

SIMULINK MODEL



OBSERVATIONS

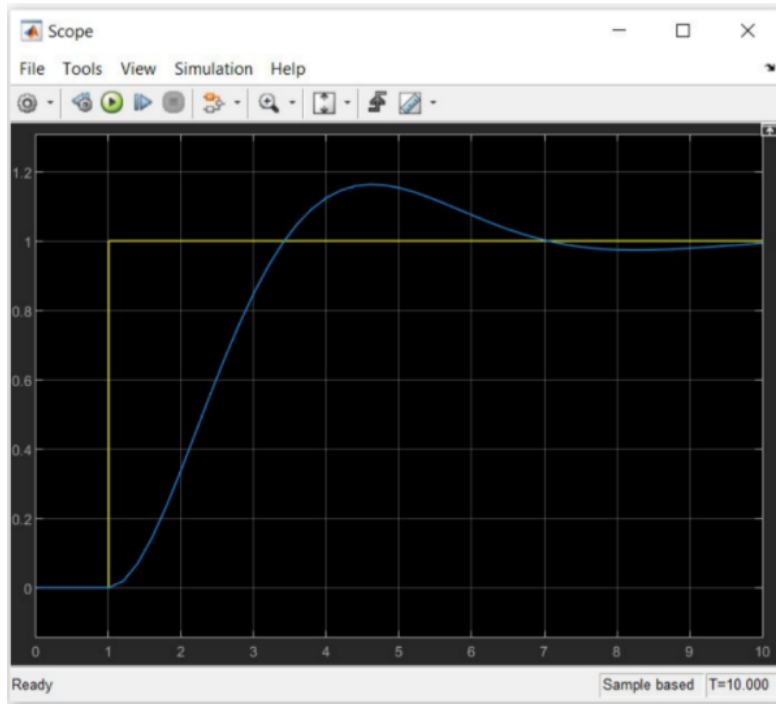
- 1) Coefficients are [1,2,1]:- The system is critically damped.
Z=0



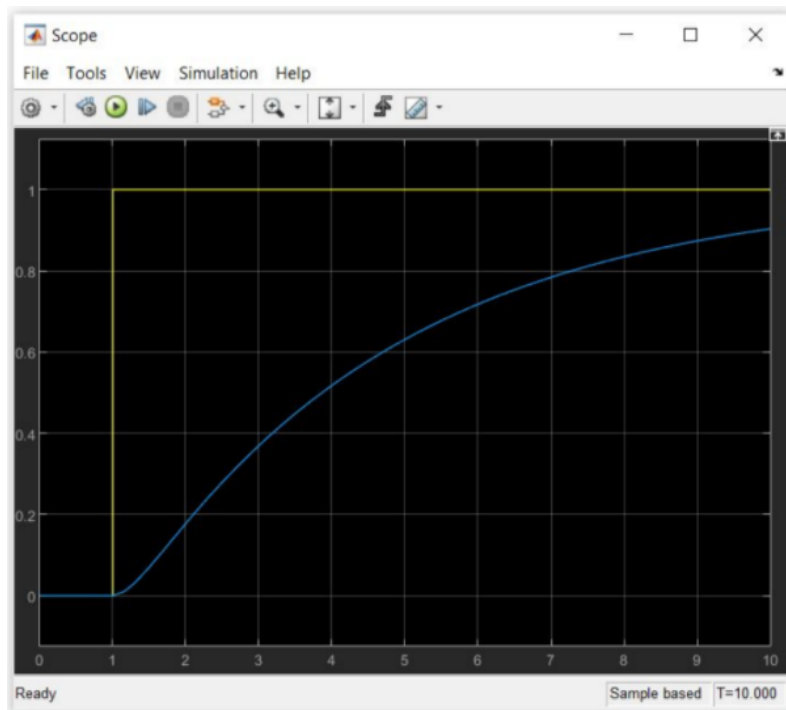
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2) Coefficients are [1,1,1]:- The system is underdamped.
 $Z < 0$



3) Coefficients are [1,4,1]:- The system is overdamped
 $Z > 0$



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SIMULINK Model for First Experiment

RESULT

Using a constant source, we get different damping conditions with different values of zeta and hence can be compared by their respective graphs.

PRECAUTIONS

- 1) Take the coefficients of transfer function accurately according to the calculation to avoid absurd graphs.
- 2) Make proper connections of the blocks with the scope.

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