Exercise 1(A) - In-Lab Task (SIMULINK)

1. Mechanical System
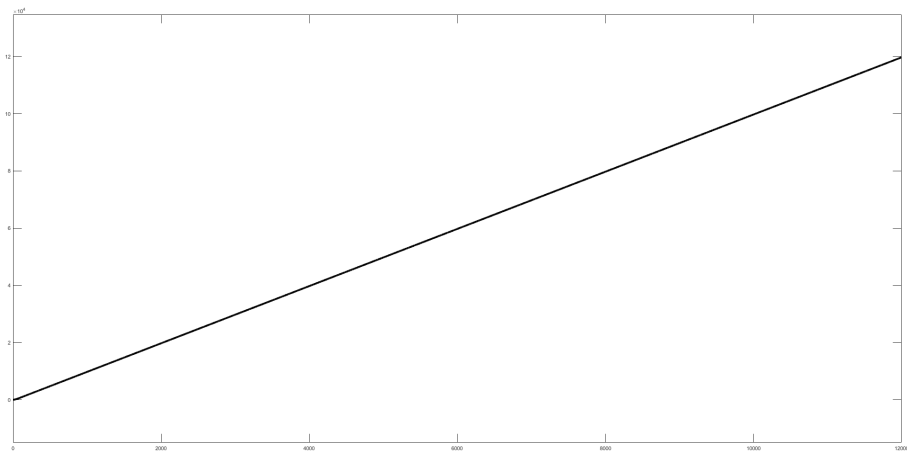

SIMULINK Model
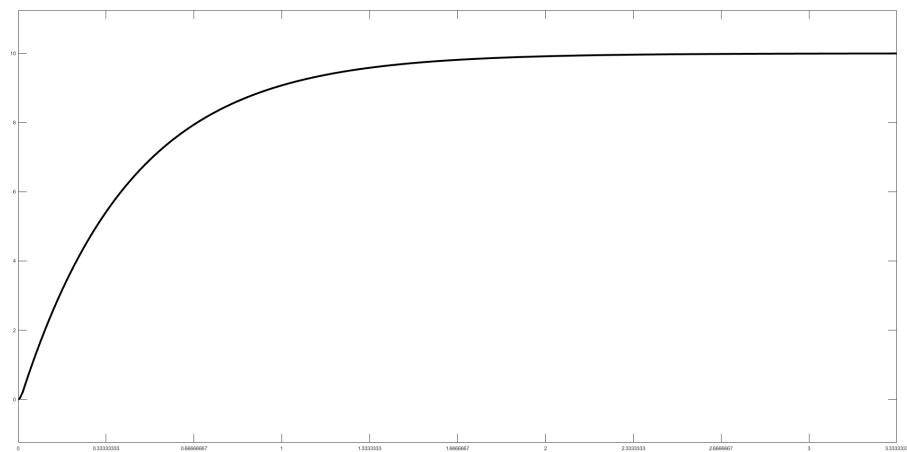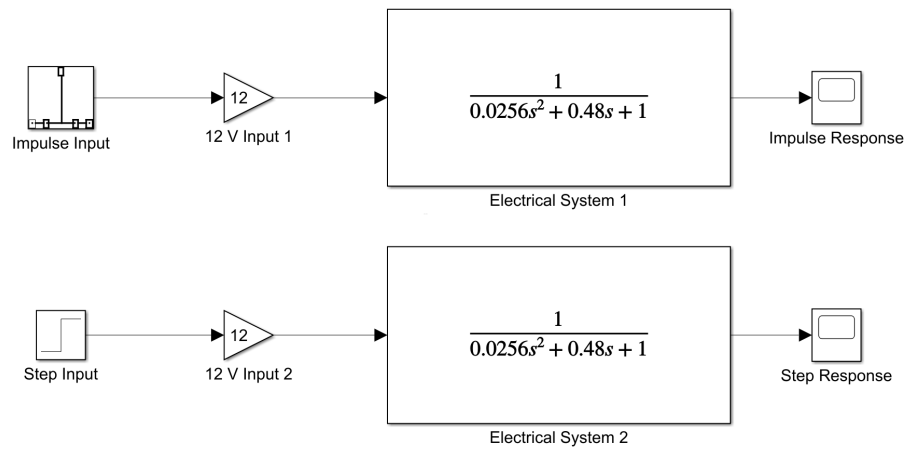

Impulse Response

Step Response

2. Electrical System

$$\frac{1}{0.0256s^2 + 0.48s + 1}$$

Impulse Input   12 V Input 1   Electrical System 1   Impulse Response
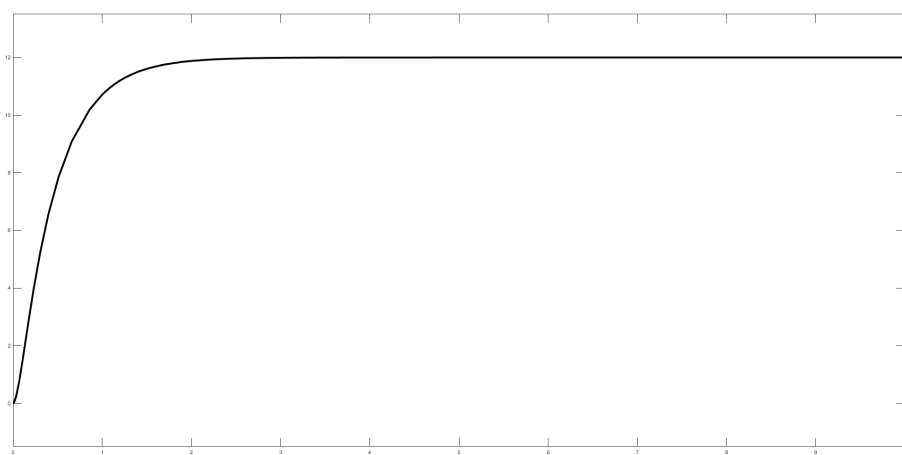
Step Input   12 V Input 2   Electrical System 2   Step Response
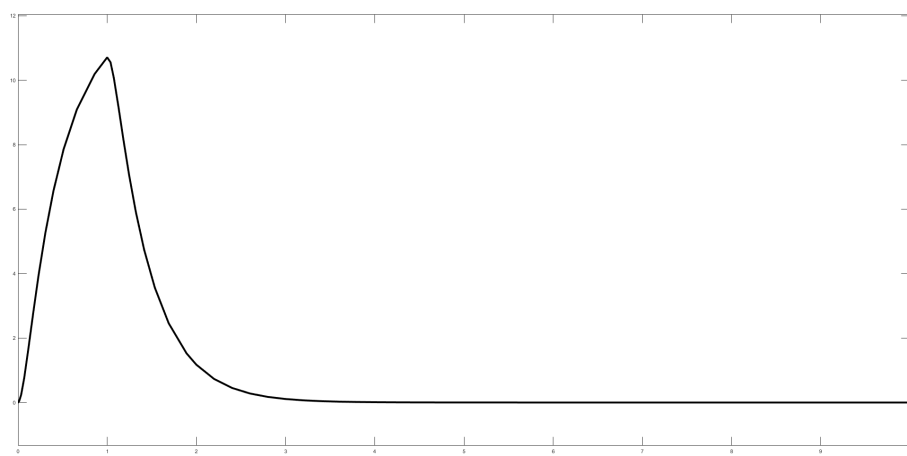
SIMULINK Model

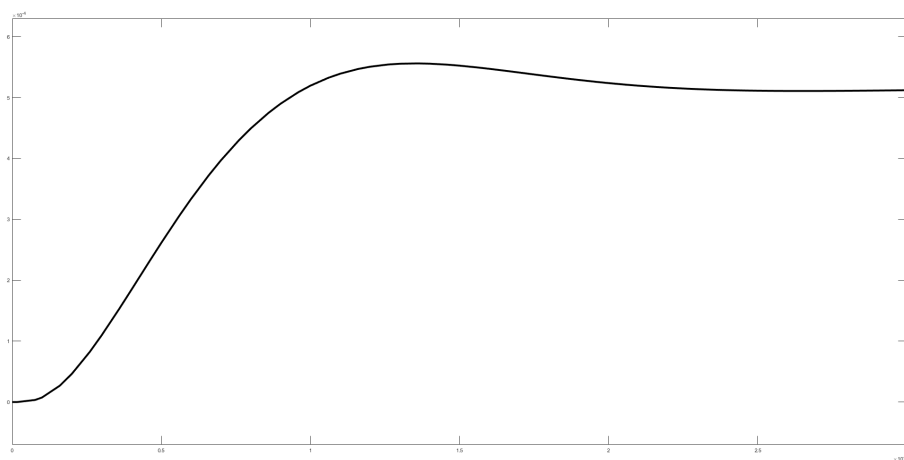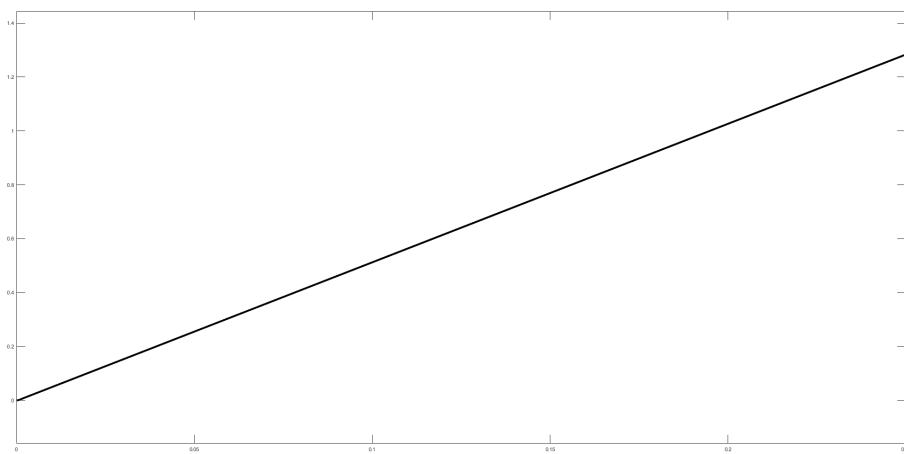Impulse Response

Step Response

3. Electromechanical System

$$\frac{1.94}{4.73e-7s^3 + 0.001824s^2 + 4.526s}$$

Armature Controlled Motor 1

$$\frac{1.94}{4.73e-7s^3 + 0.001824s^2 + 4.526s}$$

Armature Controlled Motor 2

Impulse Input   12 V Input 1   Impulse Response

Step Input   12 V Input 2   Step Response

SIMULINK Model

Impulse Response

Step Response