Zewail City for Science and Technology
Nanotechnology Engineering Program
Quiz 1

NANENG 512
Applied Digital Control and Drives
Fall 2020

Name: ID#:
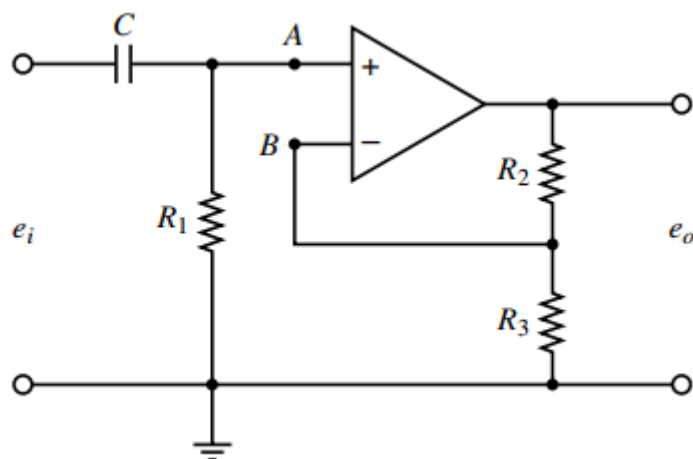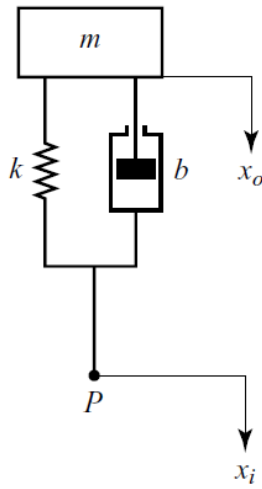
Problem 1

Obtain the transfer function $E_0(s)/E_i(s)$ of the op-amp circuit.

Solution

Problem 2

A. For the following mechanical system, prove that $G_{(s)} = \dfrac{X_{0(s)}}{X_{i(s)}} = \dfrac{bS+K}{(mS^2+bS+K)}$

B. As well as draw the Free Body Diagram.

m

k b x_o

P

x_i

Solution