

ENEE 460 Fall 2016 Homework Set 4: Assigned Wednesday September 21, 2016 – not for grading

Read Sections 3.1 and 3.2 of the book chapter 3 on SYSTEM MODELING and continue into section 3.3. Also learn how discrete time systems arise from approximations as in example 3.5, and the discussion of difference equations as in page 3-13.

Do Problem 3.10. Suppose the disturbance  $T_d$  is zero. What is the transfer function from input current  $I$  of the motor to the output angle  $\phi_2$ ? What is the time domain solution for the output angle given a general input current as a function of time  $t$ ?