16.31 Fall 2005 - Homework 2

Prof. Charles P. Coleman

Version: 1.0
Date Out: Friday 16 September 2005
Date Due: Friday 23 September 2005 2pm

Problem 1

Conditions for Linear Time Invariance (LTI):
DeRusso et al., Problem 1.1

Problem 2

LTI Test:
DeRusso et al., Problem 1.3, Parts (b), (d), (f), (h)

Problem 3

Convert State Space (SS) to Transfer Function (TF):
DeRusso et al., Problem 1.4

Problem 4

Convert SS to TF:
DeRusso et al., Problem 1.5

Problem 5

Convert Differential Equation to SS:
DeRusso et al., Problem 1.6

Problem 6

Convert State Space to Differential Equation:
DeRusso et al., Problem 1.7

Problem 7

Convert TF to SS:
DeRusso et al., Problem 1.8

Problem 8

Introduction to Pole Placement:
DeRusso et al., Problem 1.10

Problem 9

Convert Differential Equation to SS:
DeRusso et al., Problem 1.11