

ECE-205 : Dynamical Systems

Homework #8

Due : Friday Feb 1 at 5 PM

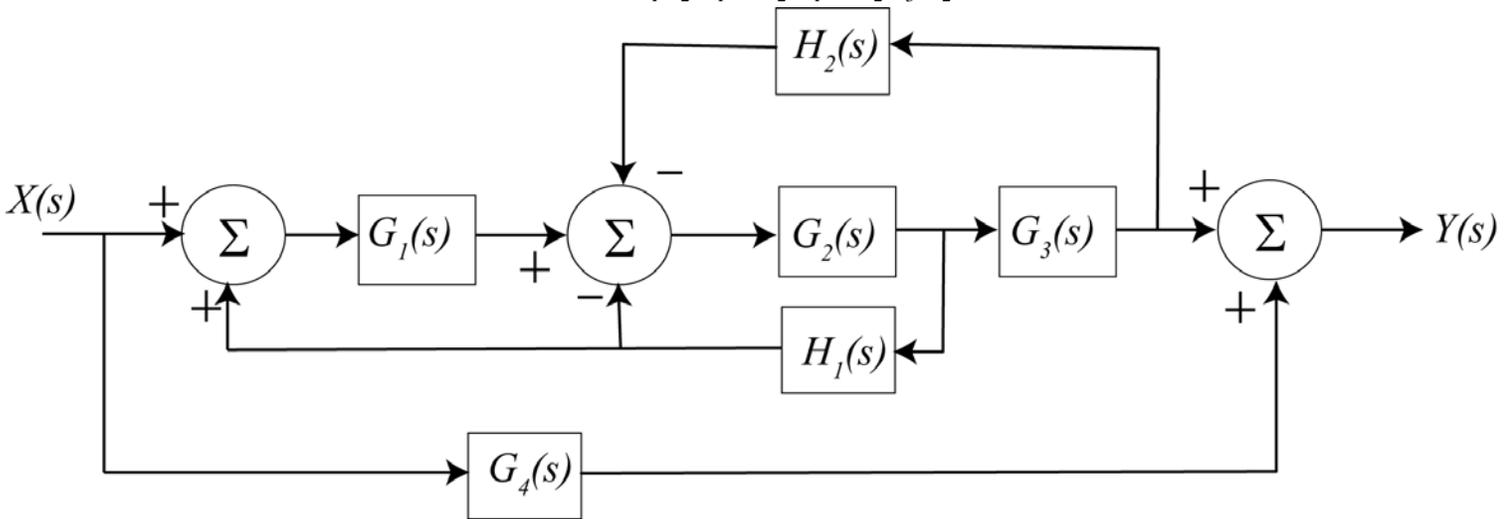
Read section 6.7 for problems 1-3. You are responsible for this material, but we will not cover it in class.

1) Chapter 6, Problem 6.7

2) Chapter 6, Problem 6.8

3) For the block diagram shown below, determine a corresponding signal flow diagram and show that the closed loop transfer function is

$$H_{system} = \frac{G_1 G_2 G_3 + G_4 (1 - G_1 G_2 H_1 + G_2 H_1 + G_2 G_3 H_2)}{1 - G_1 G_2 H_1 + G_2 H_1 + G_2 G_3 H_2}$$



4) Chapter 7, Problem 7.5

5) Chapter 7, Problem 7.6

6) Chapter 7, Problem 7.1 (correction to solutions: 2 marginal, 1 stable, 2 unstable)

7) Chapter 7, Problem 7.2

8) Chapter 7, Problem 7.3

9) Chapter 7, Problem 7.4

10) Chapter 7, Problem 7.7

11) Chapter 7, Problem 7.8