KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
ELECTRICAL ENGINEERING DEPARTMENT

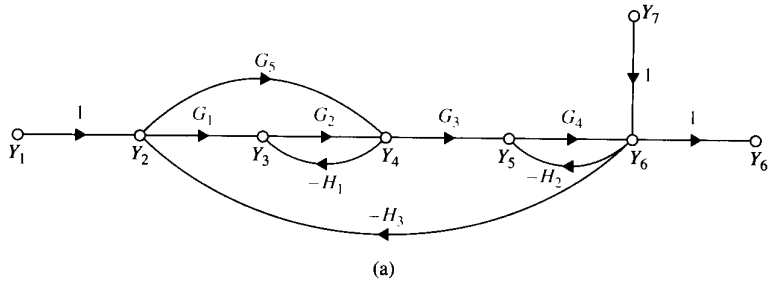
EE380 / 011	**Control Engineering I**	**HW# 2**

From your text book:

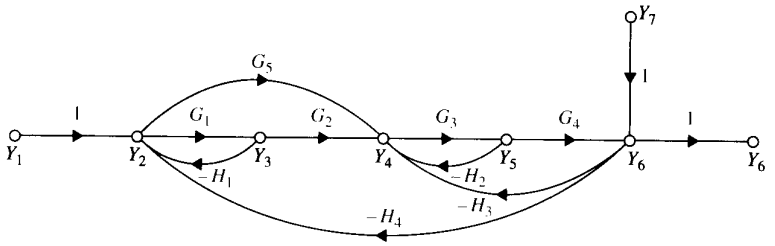
Chapter 2: [MP2.6]

Problem 1:

Find the following transfer function for the SFG shown below $\left.\frac{Y_6}{Y_1}\right|_{Y_7=0}$ *and* $\left.\frac{Y_6}{Y_7}\right|_{Y_1=0}$.



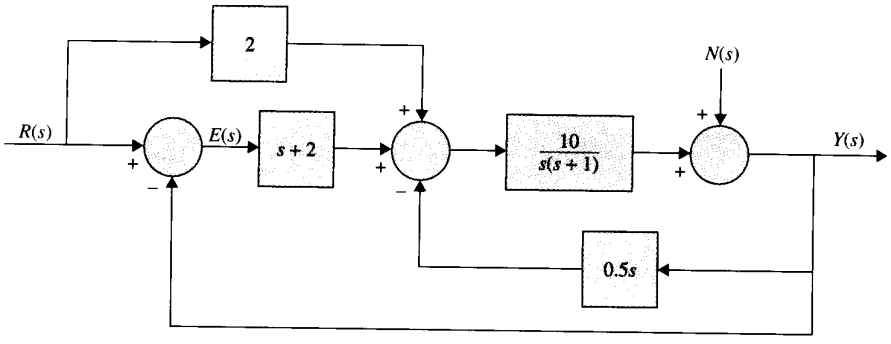
(a)



(b)

Problem 2:

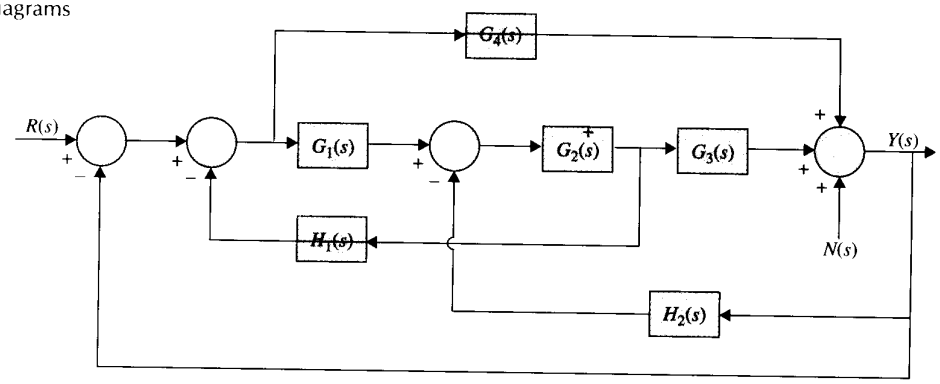
Find the following transfer functions: $a)\left.\frac{Y(s)}{R(s)}\right|_{N=0}$ $b)\left.\frac{Y(s)}{E(s)}\right|_{N=0}$ $c)\left.\frac{Y(s)}{N(s)}\right|_{R=0}$



Problem 3:

Find the following transfer functions: $a)\left.\frac{Y(s)}{R(s)}\right|_{N=0}$ $b)\left.\frac{Y(s)}{N(s)}\right|_{R=0}$

Diagrams



(a) Using block diagram reduction method.
(b) Applying the SFG gain formula directly to block diagram to find the transfer functions.

Due date September 29, 2001