SYSTEM CONTROL   **Fall 2014**

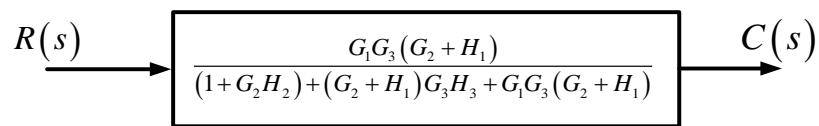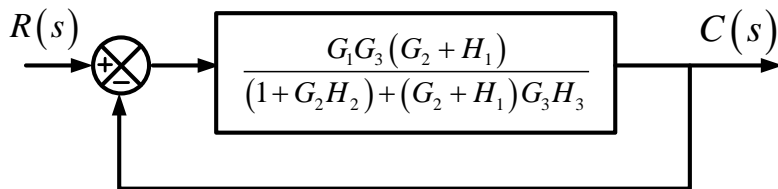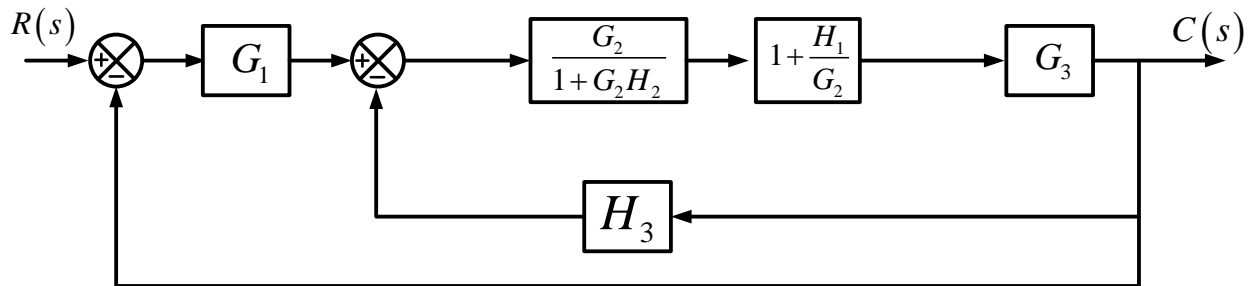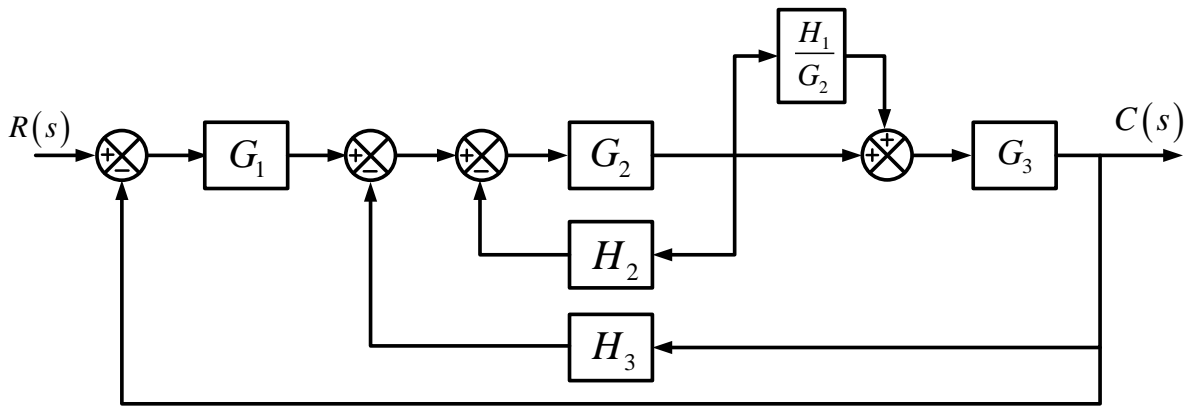   **Quiz#2 Mathematical modeling of control systems**
                                                       September 30, 2014 (Mo)

Student ID#_____   Name_____

[1] Simplify the block diagram shown in the Figure below and obtain the closed-loop transfer function C(s)/R(s).
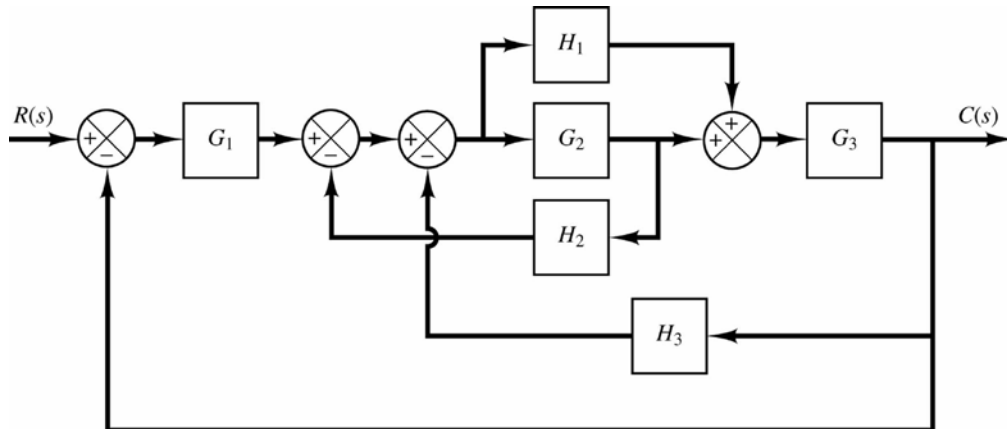
Solution

$$\therefore \frac{C(s)}{R(s)} = \frac{G_1 G_3 (G_2 + H_1)}{1 + G_2 H_2 + G_2 G_3 H_3 + G_3 H_1 H_3 + G_1 G_2 G_3 + G_1 G_3 H_1}$$