CSE461

Bonus Assignment

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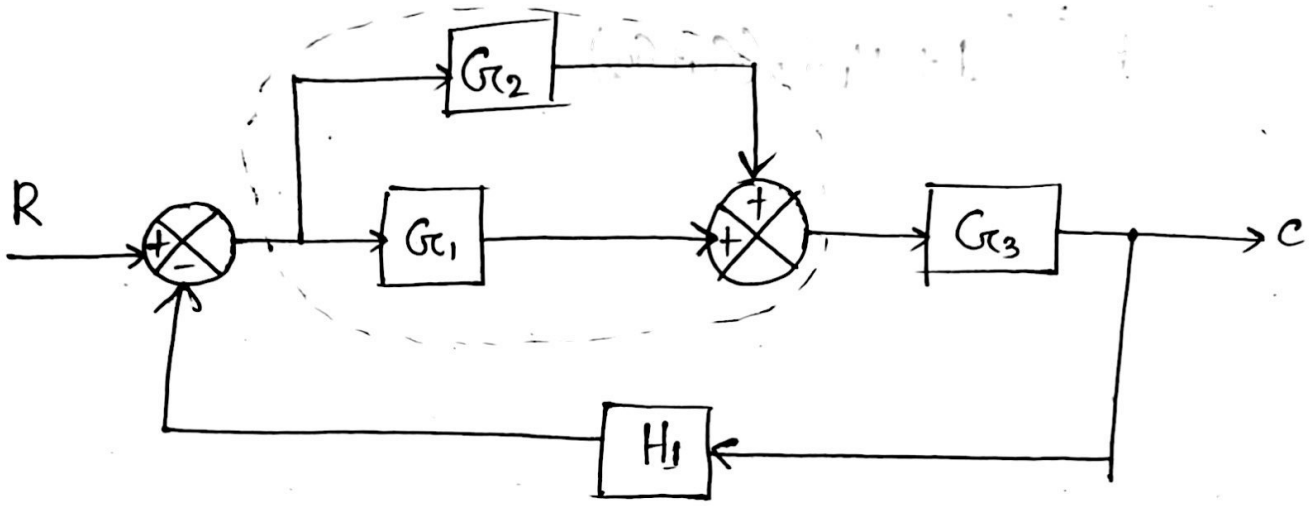
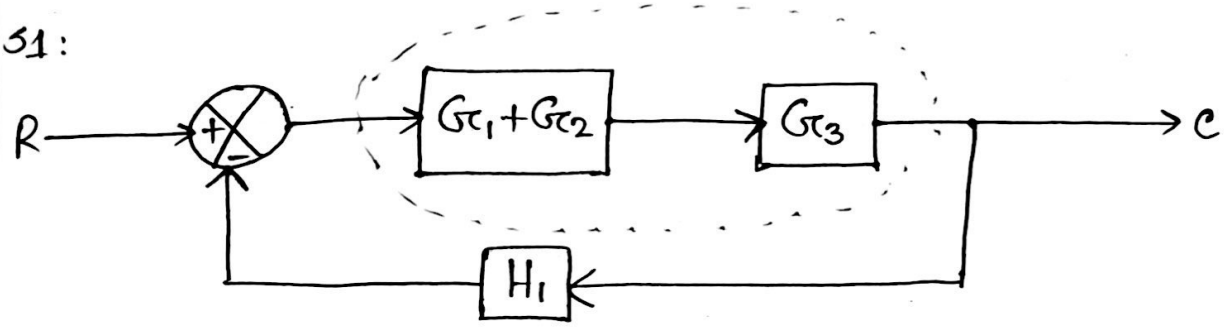
Section: 03

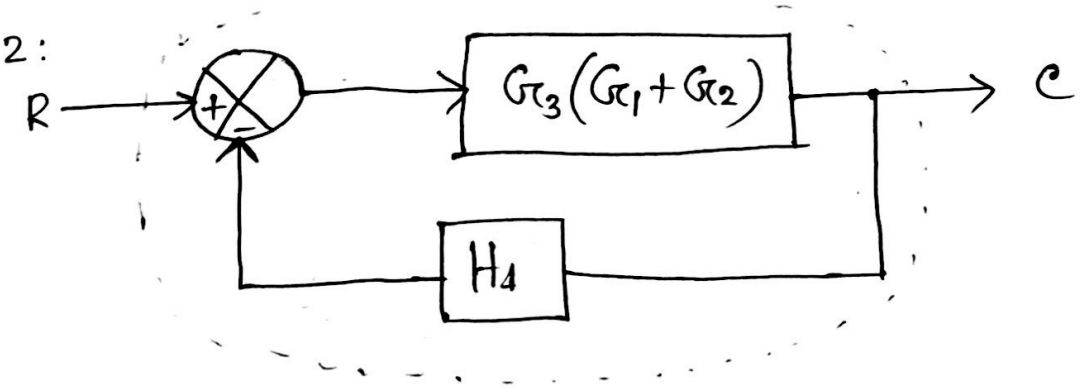
Ans. to the ques. no - 1 :



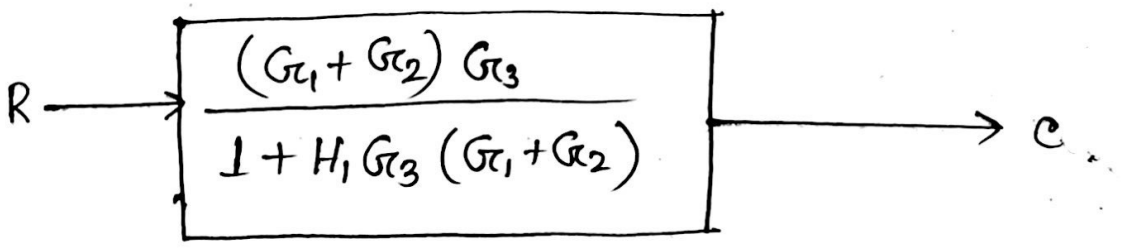
S1 :



S2 :



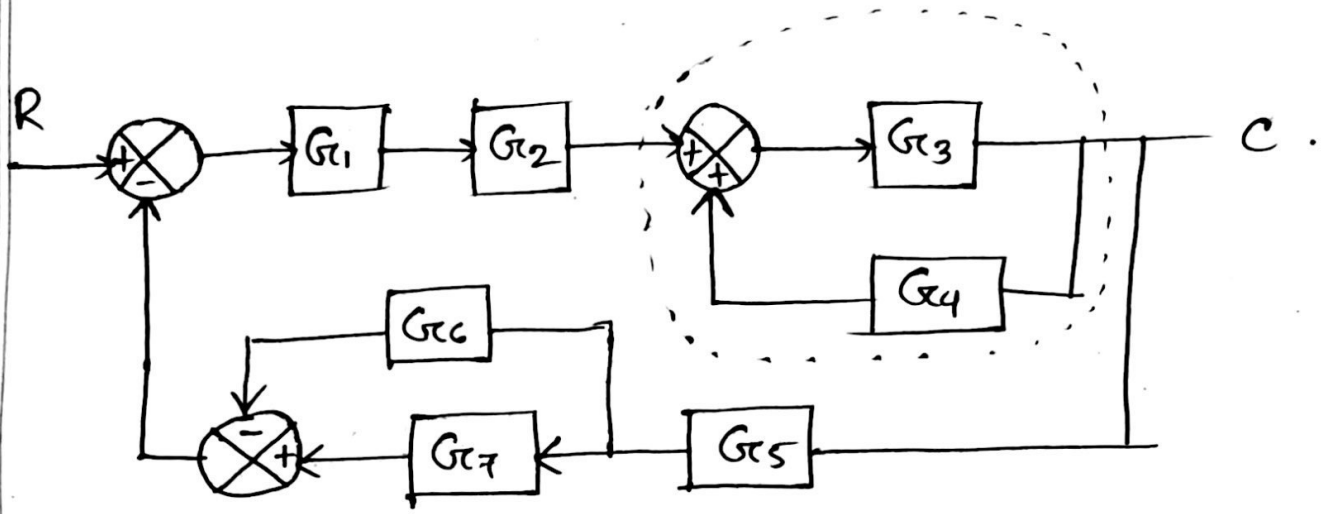
S3 :



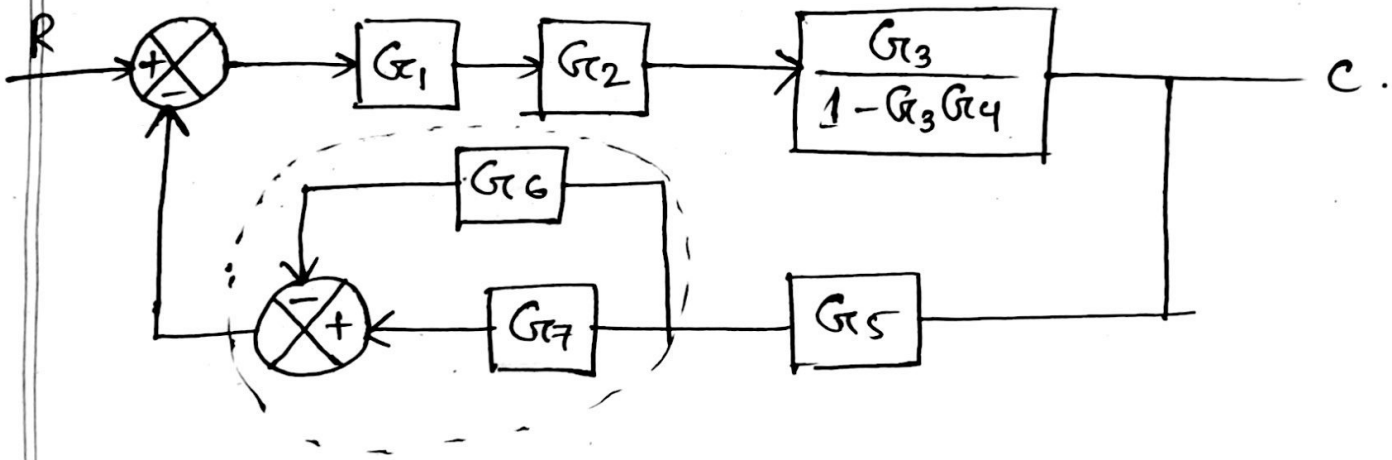
So,

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

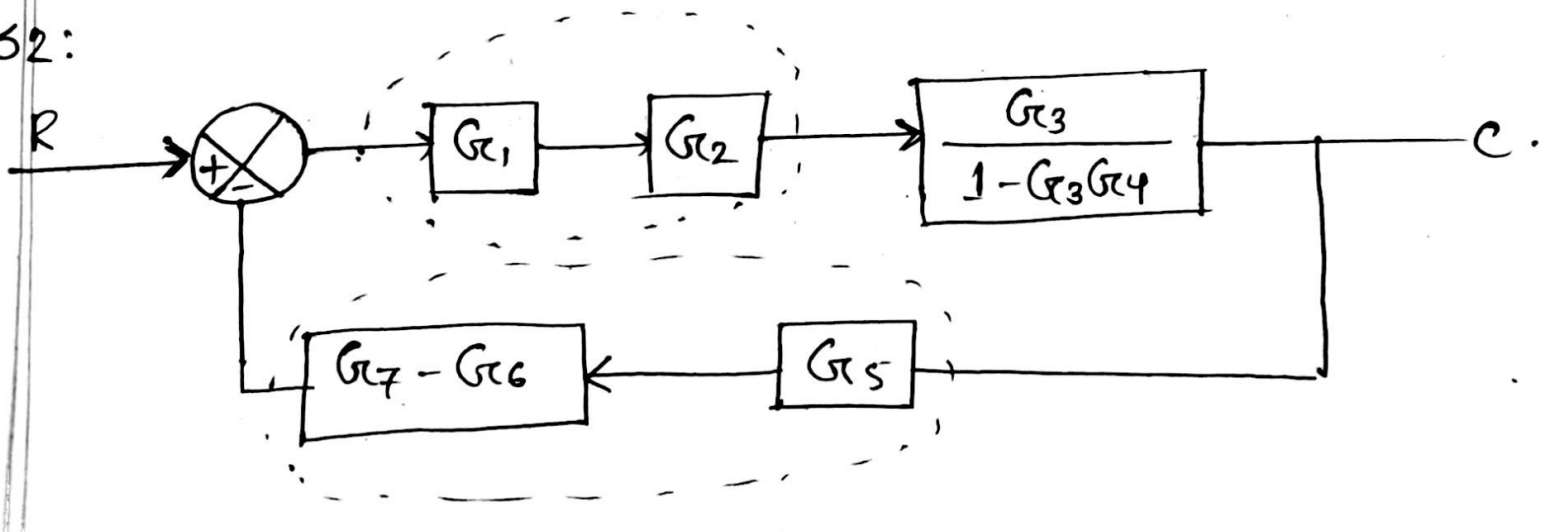
Ans. to the ques. no-2:



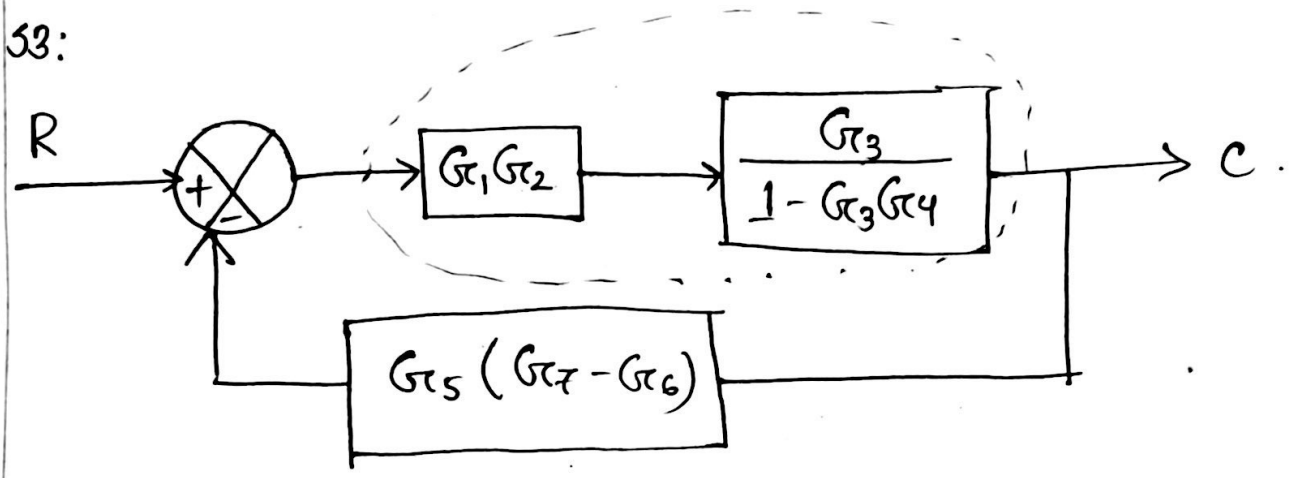
S1:



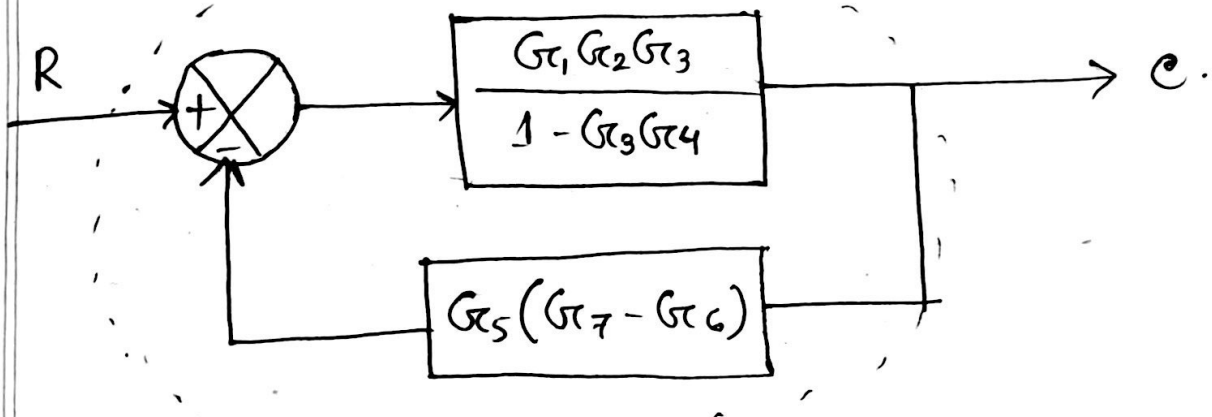
S2:



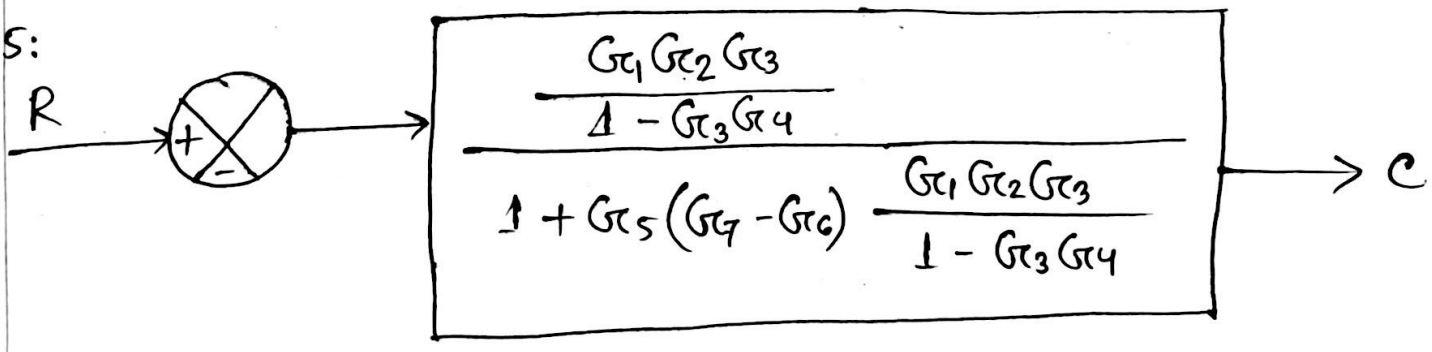
S3:



S4:

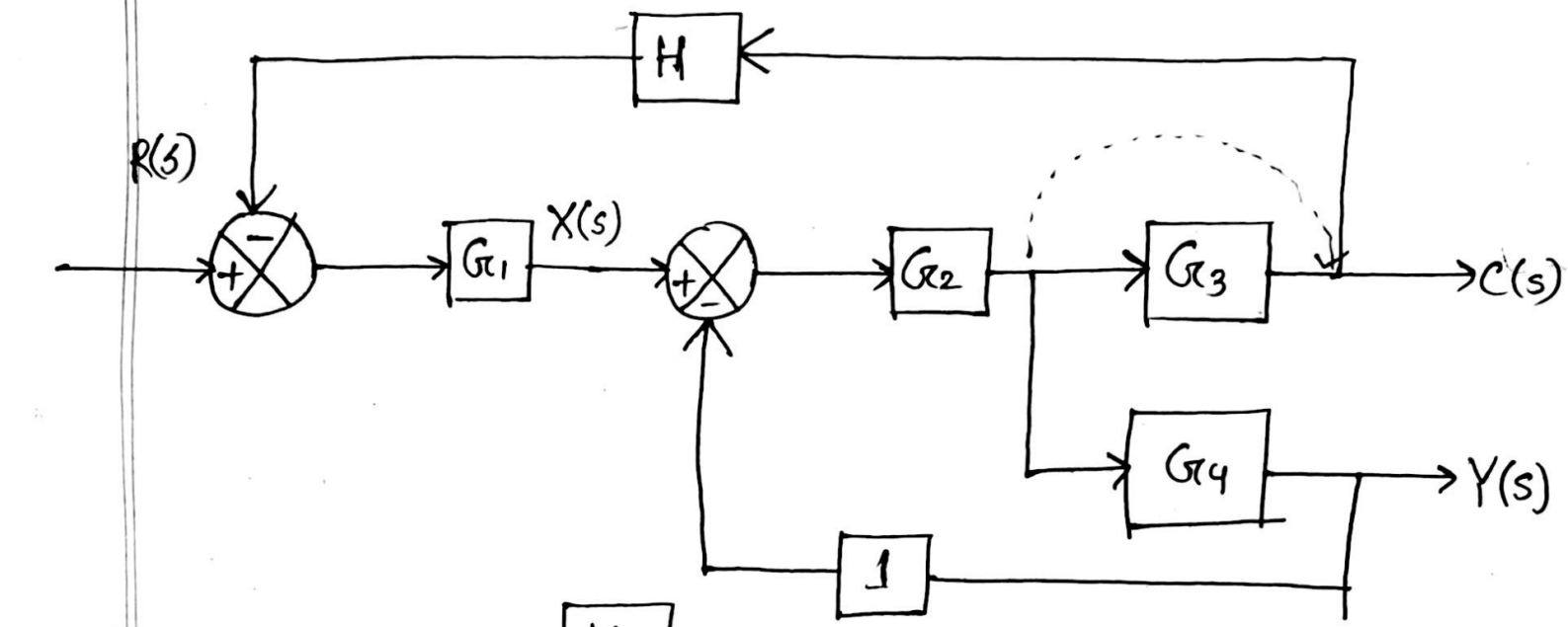


S5:

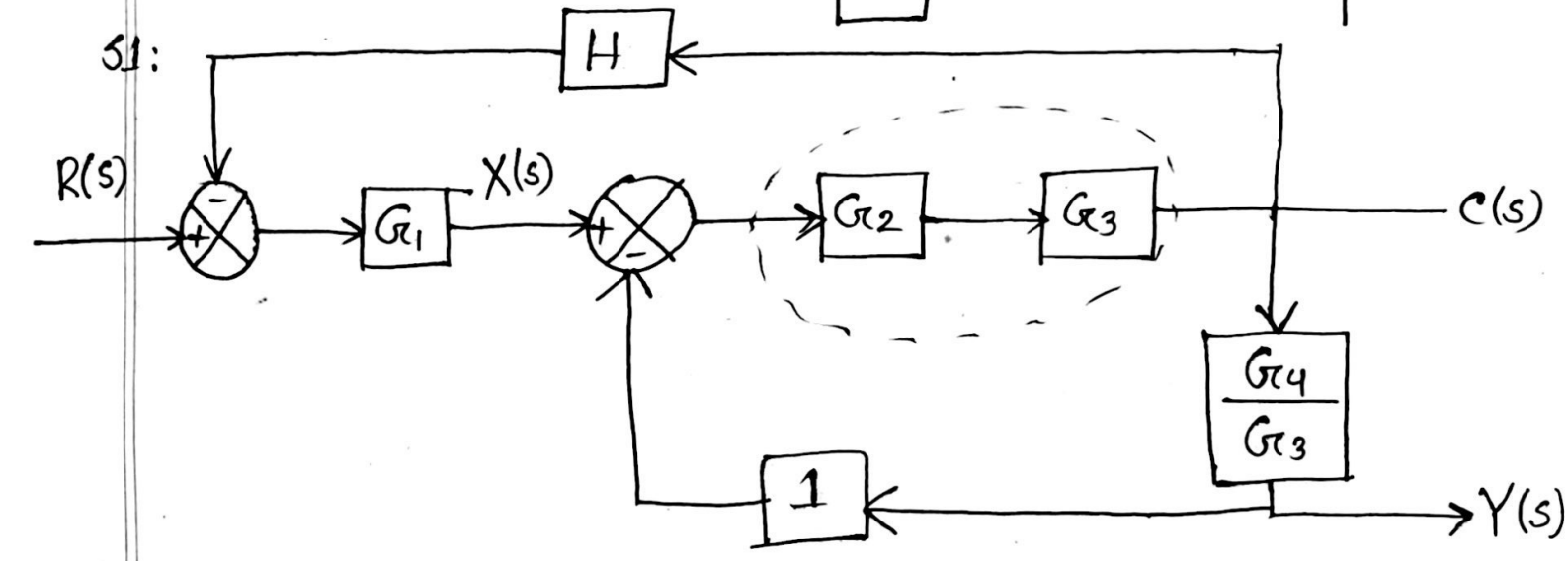


$$\frac{C}{R} = \frac{G_1G_2G_3}{(1-G_3G_4)+G_5(G_7-G_6)G_1G_2G_3}$$

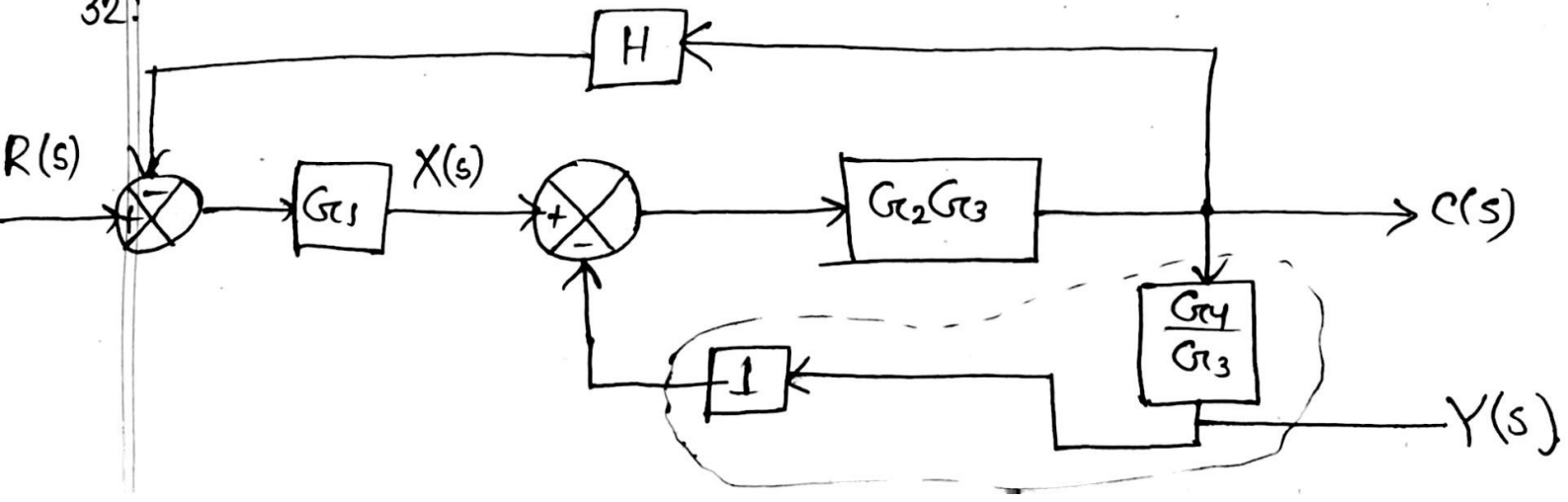
Ans. to the ques. no-3:



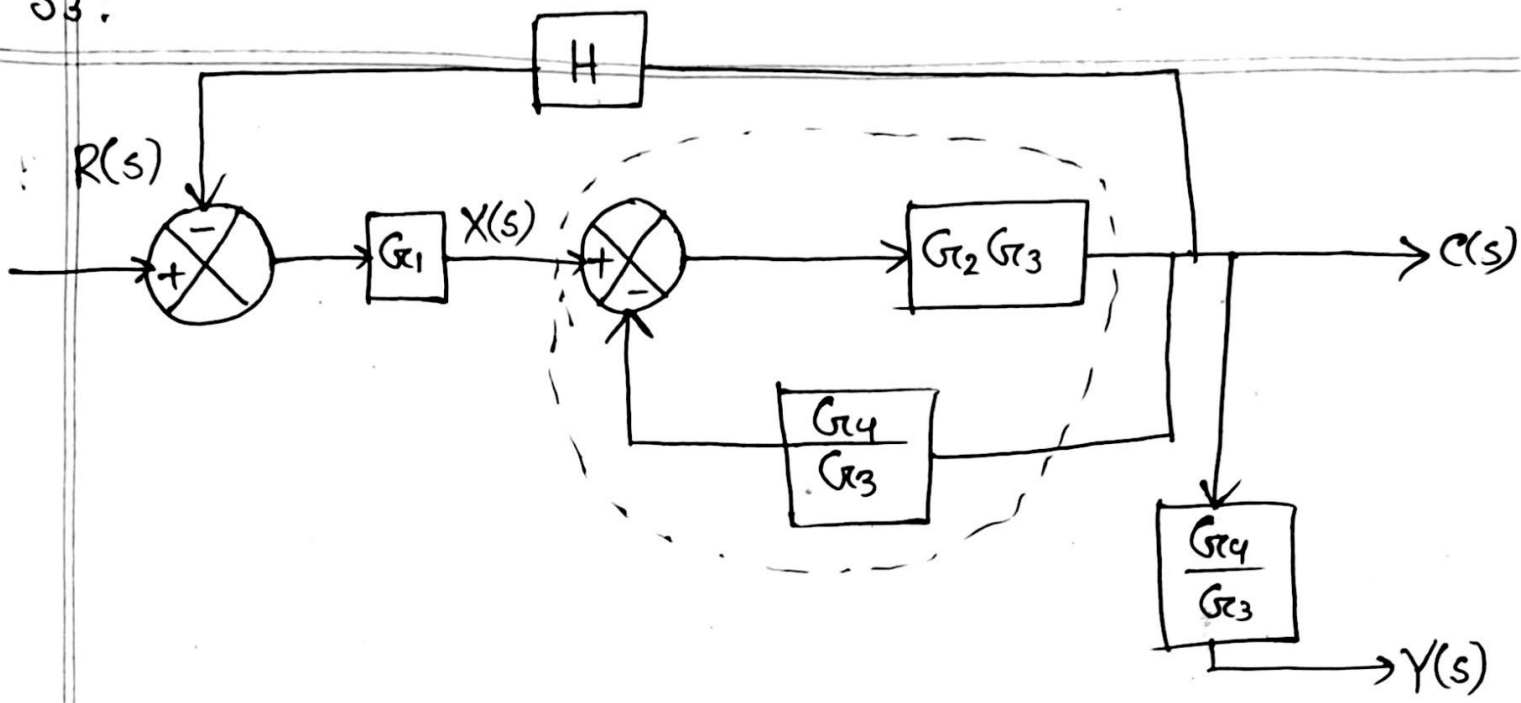
S1:



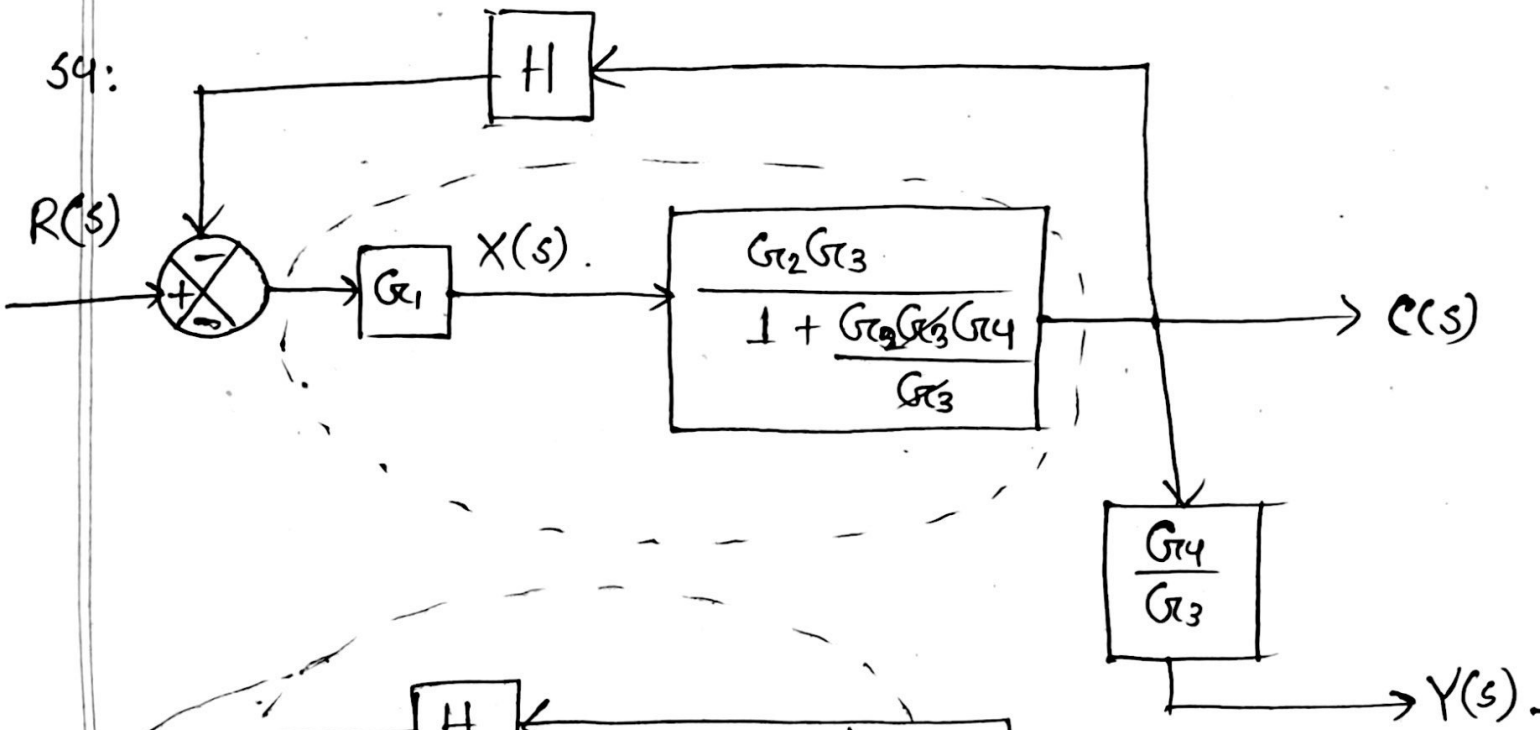
S2:



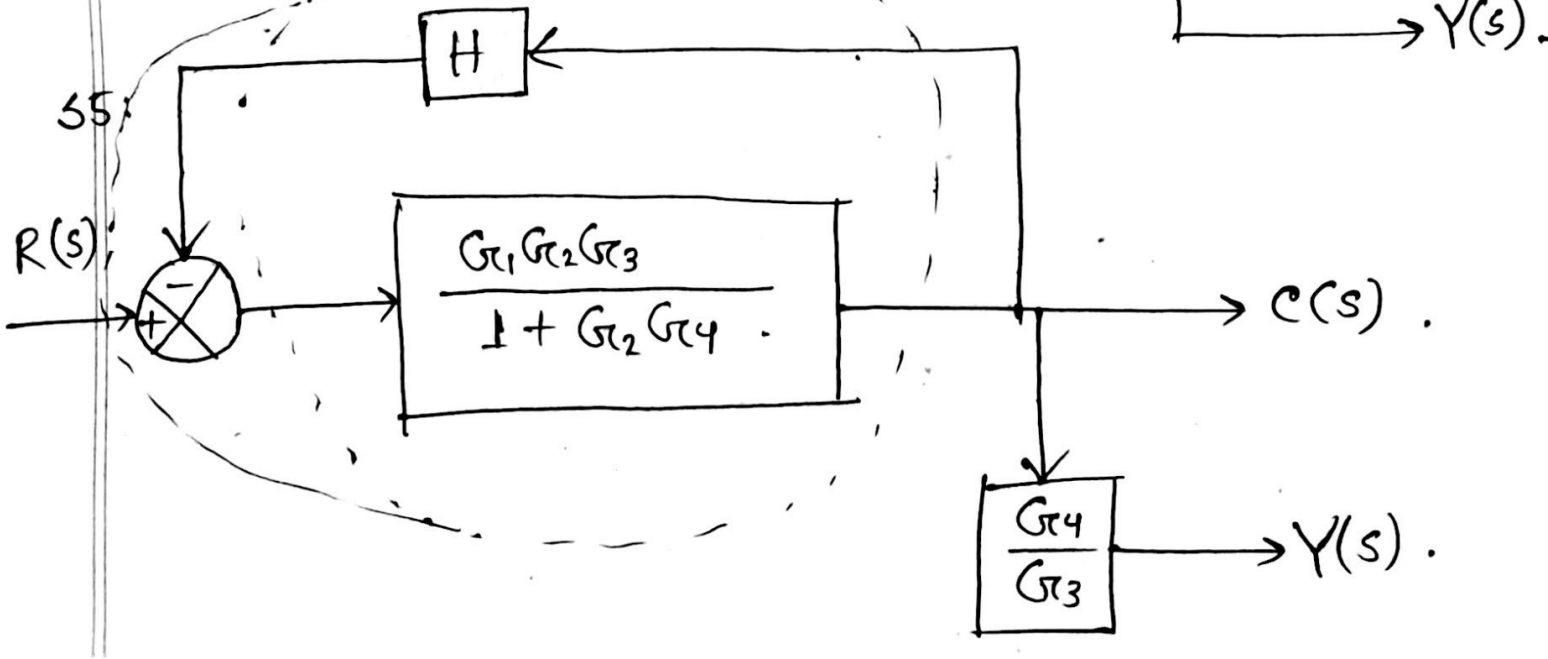
S3:


H
R(s)
G1
X(s)
G2 G3
C(s)
G4/G3
G4/G3
Y(s)

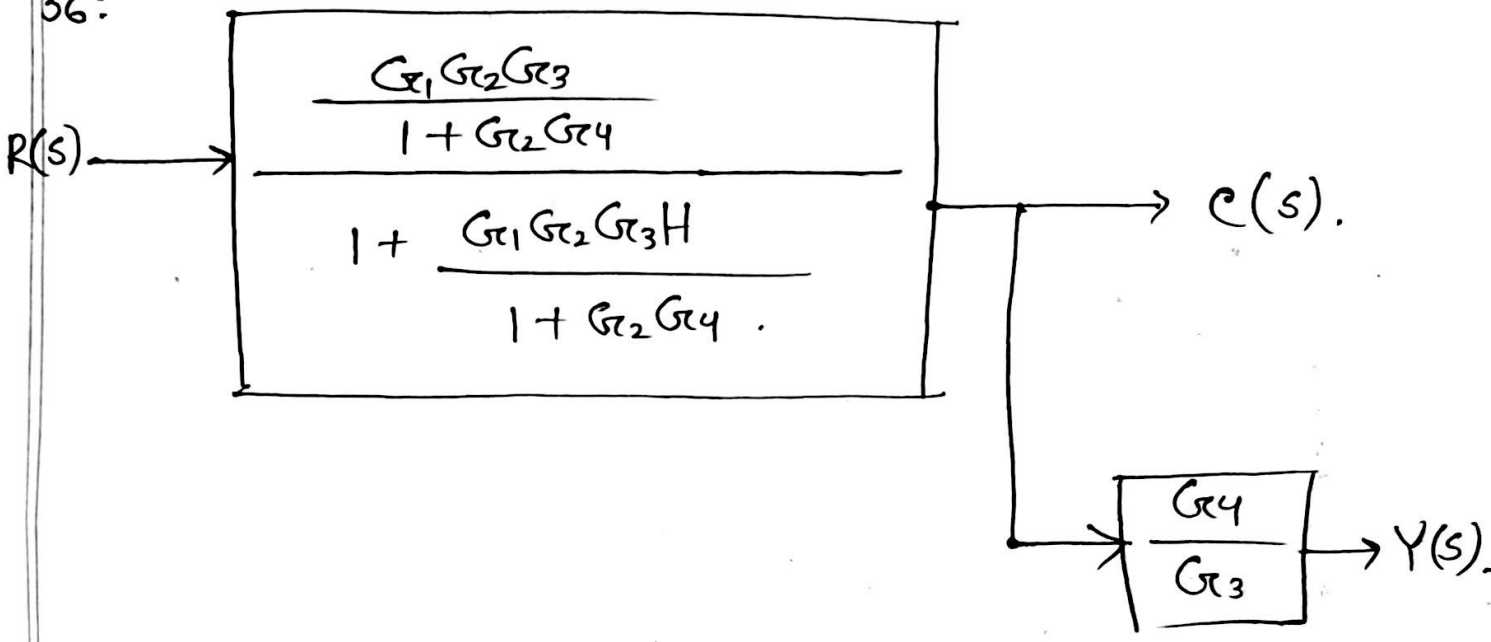
S4:


H
R(s)
G1
X(s).
G2G3 / 1 + G2G3G4/G3
C(s)
G4/G3
Y(s).

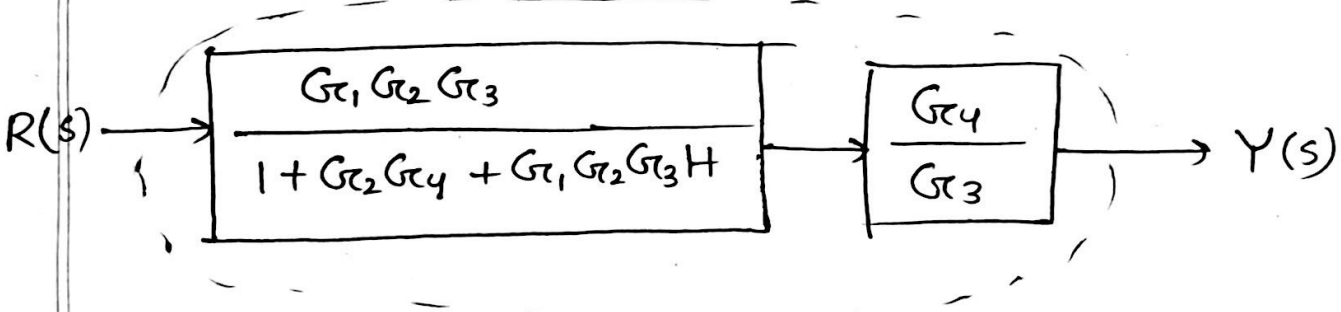
S5:

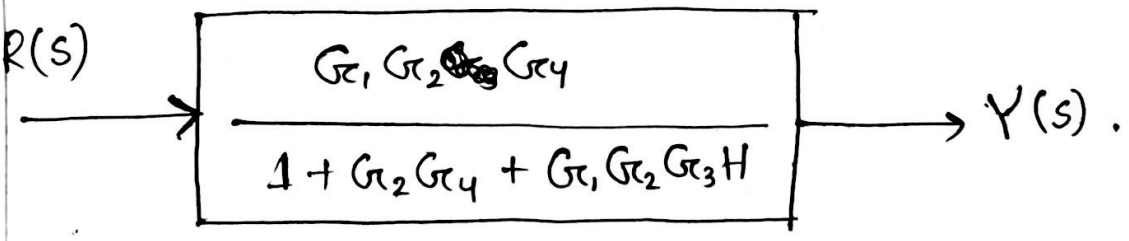

H
R(s)
G1G2G3 / 1 + G2G4 .
C(s) .
G4/G3
Y(s) .

56:



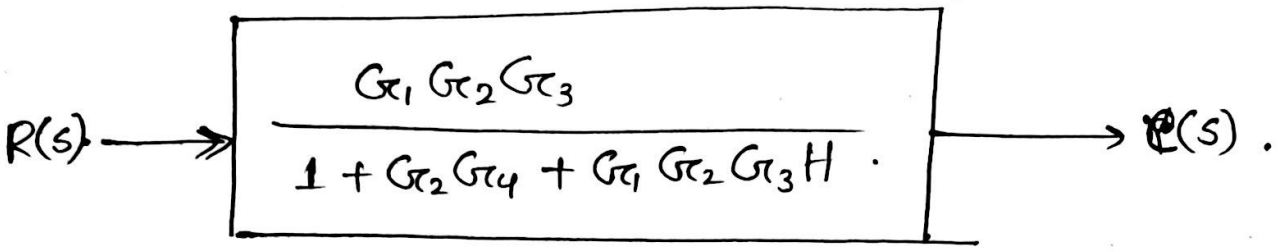
For calculating $\frac{Y}{R}(s)$, ignoring C(s):





So, $\frac{Y}{R}(s) = \frac{G_1G_2G_4}{1+G_2G_4+G_1G_2G_3H}$.

For calculating $\frac{C}{R}(s)$, ignoring $\frac{Y}{R}(s)$.



So, $\frac{C(s)}{R} = \frac{G_1 G_2 G_3}{1 + G_2 G_4 + G_1 G_2 G_3 H}$