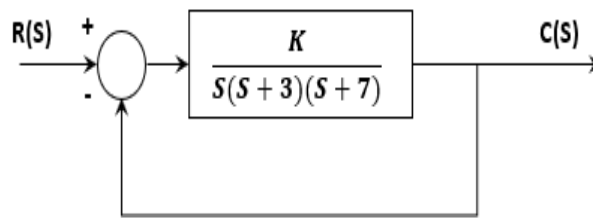
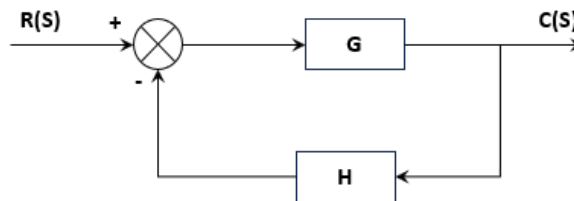


المطلوب حل المسائل التالية في مقرر أنظمة السيطرة

Q₁: For the closed-loop system, Find the ranges of the values of K for stability:



Q₂: The following negative control system will be unstable when:
GH = ...



Q₃: A system with a closed-loop transfer function having poles at -2 , -3 , $-4 + 2j$, is the system stable or not ...Explain the reason.

Q₄: If: $S^3 + 3S^2 + 4S + A = 0$. The roots of the characteristic equation lie in the left if of the s-plane. Calculate the value of the A.

Q₅: A system with a closed-loop transfer function having poles at -2 , -3 , $j2$, is the system stable or not ...Explain the reason.

Q₆: If the phase angle at gain crossover frequency is estimated to be (-105°) , what will be the value of phase margin of the system?

Q₇: Consider a unit impulse signal ($\delta(t)$) applied as the input to the first-order system. What is the Laplace transform of the unit impulse response, $c(t)$?

