

<u>Question 1</u>	$y(t) = \frac{4}{5}(e^{3t} - e^{-2t})$
<u>Question 2</u>	$R(s) \longrightarrow \frac{[1 + G_1(s)][G_2(s) - G_3(s)]}{1 + G_2(s)H_1(s)} \longrightarrow C(s)$
<u>Question 3(a)</u>	$K_p = 91, K_D = 2.375$
<u>Question 3(b)</u>	$e(\infty) = 0.0521$
<u>Question 4(a)</u>	$0 < K < 116$
<u>Question 4(c)</u>	$s = -1.1 \pm j2.9$
<u>Question 4(d)</u>	$t_p = 1.09 \text{ s}, \quad t_r = 0.67 \text{ s}$
<u>Question 5(a)</u>	$K_C \alpha = 0.4$
<u>Question 5(c)</u>	$G_C(s) = 1.11 \frac{s + 4.686}{s + 12.98}$