Errata
Introduction to BME, Third Edition

Chapter 7

Page 432, Problem 32
For the one-compartment repeat dosage in Section 7.5.4, derive Eq. 7.42 from 7.41 and Eq. 7.44 from 7.43.

Page 435, Problem 54. Change the initial conditions to $q_1(0) = 0$ and $q_2(0) = 2$.

Page 436, Problem6 1. Remove the extra t
$2e^{-0.1438t}\,u(t) - 2e^{-0.1438\,t-10}\,u(t-10)$

Page 437, Problem 69.
The transfer rates are $K_{20} = 3,\ K_{21} = 5,$ and $K_{12} = 7.$

Page 440, Problem 92
$K_{12} = 0.4,\ K_{10} = 0.5,\ K_{21} = 0.6,\ K_{31} = 0.9,\ \cancel{K_{21} = 0.4}\,,\ K_{32} = 0.7,\ K_{23} = 0.2,$

Page 440, Problem 93
$K_{12} = 0.4,\ K_{10} = 0.5,\ K_{21} = 0.6,\ K_{31} = 0.9,\ \cancel{K_{21} = 0.4}\,,\ K_{32} = 0.7,\ K_{23} = 0.2,$
$K_{13} = 0.8,$ and $f_2(t) = 3e^{-t-1}\,u(t-1).$

Page 442, Problem 100
$K_{12} = 0.4,\ K_{10} = 0.1,\ K_{23} = 0.6,\ K_{34} = 0.7,\ K_{41} = 0.4,\ K_{40} = 0.2,$ and $f_3(t) = 15\delta(t).$

Page 442, Problem 102
$K_{12} = 0.5,\ K_{23} = 0.5,\ K_{34} = 0.5,\ \cancel{K_{41} = 0.5}\,,\ K_{45} = 0.5,\ K_{51} = 0.5,\ K_{40} = 0.1,$
and $f_2(t) = 10\delta(t).$

Page 442, Problem 103
$K_{12} = 0.5,\ K_{23} = 0.5,\ K_{34} = 0.5,\ \cancel{K_{41} = 0.5}\,,\ K_{45} = 0.5,\ K_{51} = 0.5,$ and $f_1(t) = 5\delta(t).$

Page 444, Problem 107
$K_{63} = 0.9,\ K_{41} = 0.7,\ K_{78} = 1.1,\ K_{80} = 0.01,$
$K_{85} = 0.62,\ K_{21} = 15,\ K_{12} = 30,\ K_{10} = 1.0,\ K_{23} = 0.5,\ K_{32} = 0.4,\ K_{30} = 0.05,\ K_{40} = 0.08,$
$K_{45} = 0.45,\ K_{54} = 0.28,\ K_{56} = 0.05,\ K_{65} = 0.017,$ and $K_{60} = 0.018.$

Page 444, Problem 108
Fig. 7.43
$K_{63} = 0.9,\ K_{41} = 0.7,\quad K_{78} = 1.1,\ K_{80} = 0.01,\ K_{85} = 0.62,\ K_{21} = 7.0,$
$K_{12} = 10,\ K_{10} = 0.8,\ K_{23} = 2.0,\ \mathrm{K}_{32} = 0.3,\ K_{30} = 0.1,\ K_{40} = 0.06,\ K_{45} = 1.0,\ K_{54} = 0.3,$
$K_{56} = 0.0,\ K_{65} = 0.03,$ and $K_{60} = 0.02.$

Chapter 8
Page 473. Equation 8.67 should be (i.e., $-K_{21}q_2$ is missing in the second equation).

$$\dot{q}_1 = -K_{12} - \left(K_{10} + \frac{V_{\max}}{q_1 + K_M} \right) q_1 + K_{21} q_2 + f_1(t)$$

$$\dot{q}_2 = K_{12} - K_{20} q_2^2 - K_{21} q_2 + f_2(t)$$

Page 504. Equation 8.134 should be (i.e., K_4 is missing in the third equation).

$$\dot{q}_S = K_{-1} q_{C_1} + K_{-3} q_{C_2} - K_1 q_S q_E - K_3 q_S q_{C_1}$$

$$\dot{q}_{C_1} = K_1 q_S q_E + K_{-3} q_{C_2} + K_4 q_{C_2} - \left(K_{-1} + K_2 \right) q_{c_1} - K_3 q_S q_{C_1}$$

$$\dot{q}_{C_2} = K_3 q_S q_{C_1} - \left(K_{-3} + K_4 \right) q_{C_2}$$

$$\dot{q}_P = K_2 q_{C_1} + K_4 q_{C_2}$$

Page 504. Equation 8.134 should be (i.e., K_4 is missing in the third equation).

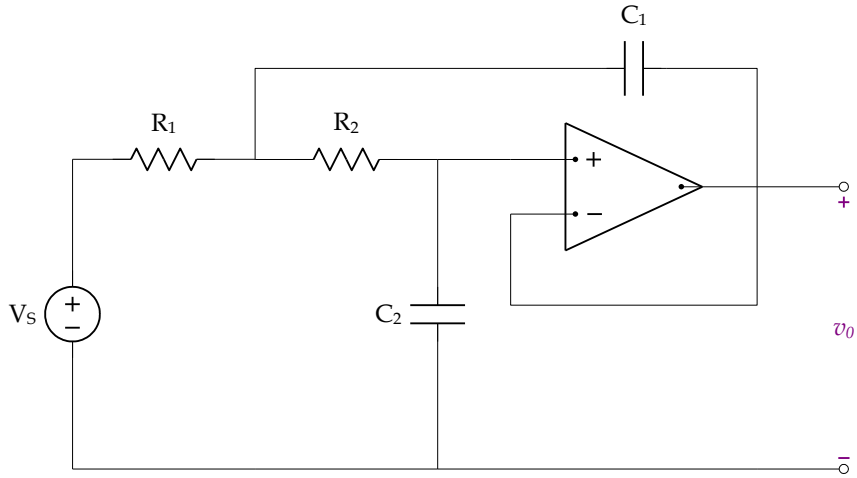
$$\dot{q}_S = \left(K_{-1} + K_1 q_S \right) q_{C_1} + \left(K_{-3} + K_1 q_S \right) q_{C_2} - K_1 E_0 q_S - K_3 q_S q_{C_1}$$

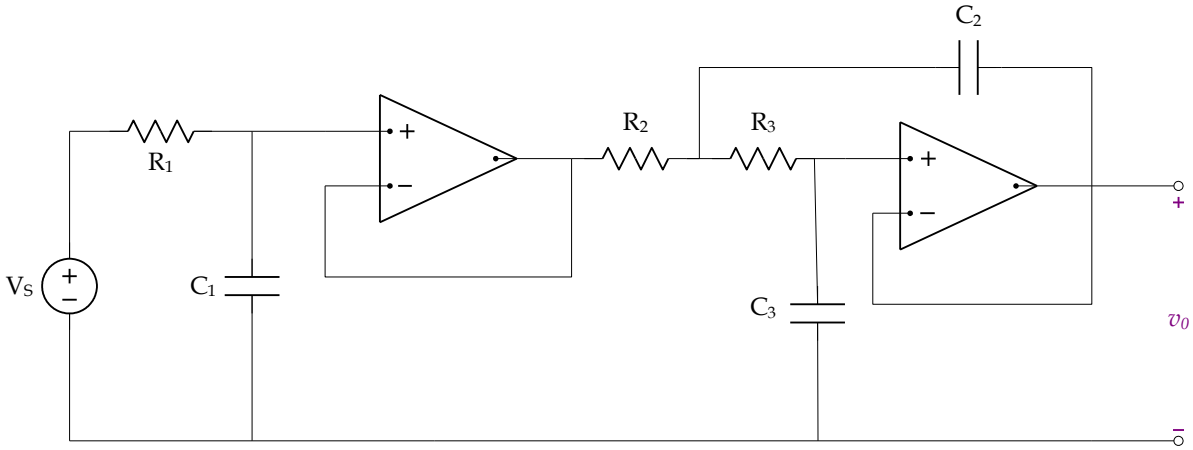
$$\dot{q}_{C_1} = K_1 E_0 q_S + K_{-3} q_{C_2} + \left(K_4 - K_1 q_S \right) q_{C_2} - \left(K_{-1} + K_2 - K_1 q_S \right) q_{c_1} - K_3 q_S q_{C_1}$$

$$\dot{q}_{C_2} = K_3 q_S q_{C_1} - \left(K_{-3} + K_4 \right) q_{C_2}$$

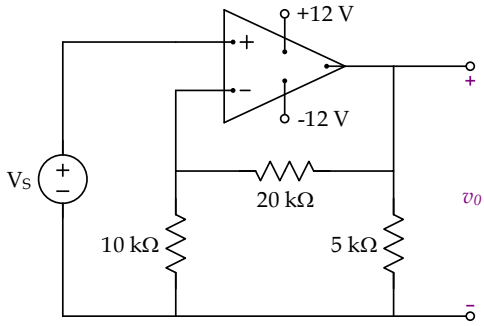
$$\dot{q}_P = K_2 q_{C_1} + K_4 q_{C_2}$$

Page 589. The input terminals of the op amp were incorrectly labeled.

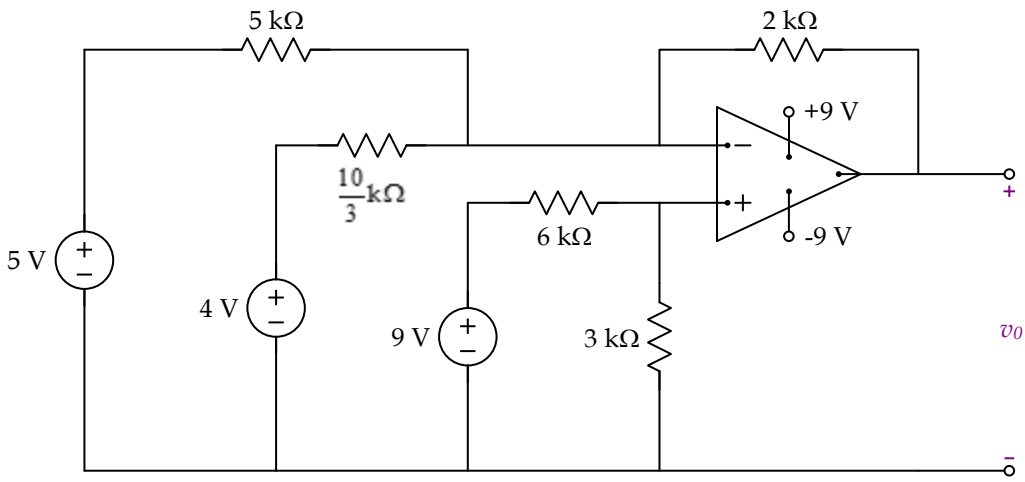




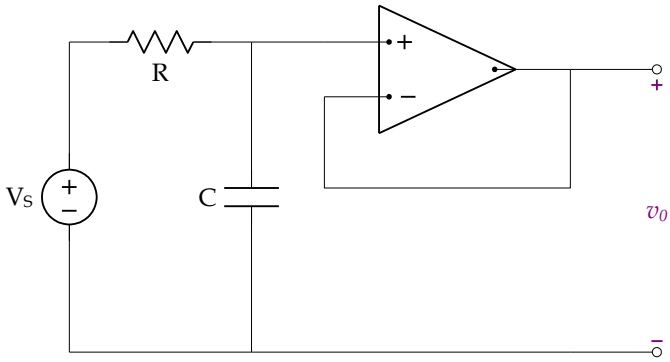
Page 602, problem 36. The input terminals of the op amp were incorrectly labeled.



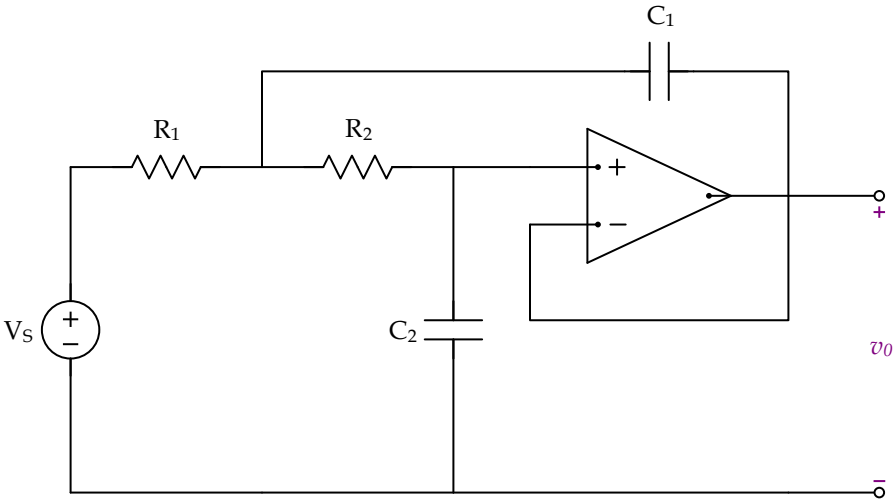
Page 602, problem 37. The input terminals of the op amp were incorrectly labeled.



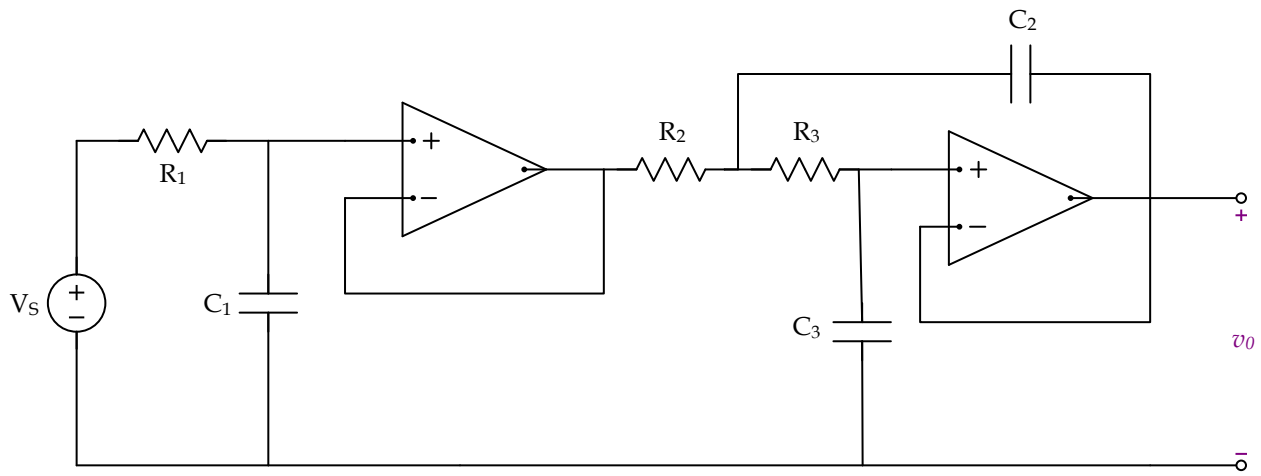
Page 607, problem 53. The input terminals of the op amp were incorrectly labeled.



Page 607, problem 54. The input terminals of the op amp were incorrectly labeled.



Page 607, problem 55. The input terminals of the op amp were incorrectly labeled.



Page 758, Section 12.3.1, 2nd paragraph, 5th line, "of charges equals approximately 3.7 × 10^{11} per cm^2.