Concept Question 5-21: If $V_{s 2}<V_{s 1}$ in the circuit of Fig. 5-30, what would you expect the direction of the current to be after the switch is moved from position 1
to 2? Analyze the process in terms of charge accumulation on the capacitor.


Figure 5-30: RC circuit switched from source $V_{\mathrm{S}_{1}}$ to source $V_{\mathrm{S}_{2}}$ at $t=0$.

Since the new voltage is lower, the capacitor will need to loose charge. Hence, $i_{c}$ in Fig. 5-30(c) should be counterclockwise.

