

Physics 2135

Special Homework Assignment #6

For the circuit shown $R = 15 \text{ k}\Omega$, $C = 6 \text{ }\mu\text{F}$, and $\Delta V = 30 \text{ V}$. Initially the capacitor is uncharged. The switch S is then closed and the capacitor begins to charge. After the switch is closed, how much time will elapse before the current through the resistor is one-third of its maximum value? What is the charge on the capacitor at this time?

