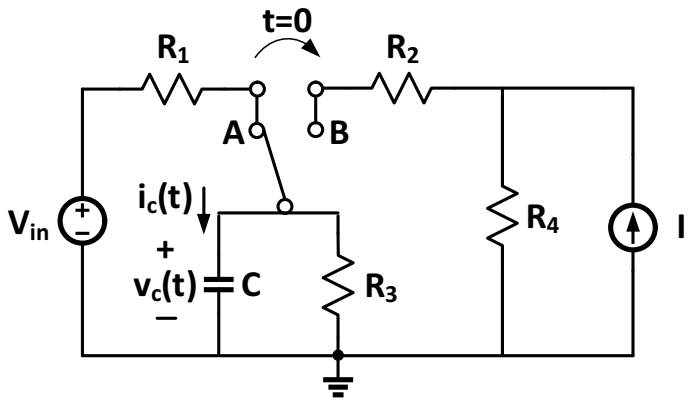
ECE 205 - WS 6

Name: **UIN:**

1. The switch in the circuit shown below is moved at time $\mathbf{t = 0}$ as shown. Compute voltage $\mathbf{v_c(t)}$ and current $\mathbf{i_c(t)}$ after the switch is moved. Assume $\mathbf{R_1 = 2\ k\Omega}$, $\mathbf{R_2 = 2\ k\Omega}$, $\mathbf{R_3 = 2\ k\Omega}$, $\mathbf{R_4 = 4\ k\Omega}$, $\mathbf{C = 1\ \mu F}$, $\mathbf{V_{in} = 10\ V}$, $\mathbf{I = 6\ mA}$.



2. The switch in the circuit shown below is moved at time $\mathbf{t = 0}$ as shown. Compute voltage $\mathbf{v_c(t)}$ after the switch is moved. Assume $\mathbf{R_1 = 1\ k\Omega}$, $\mathbf{R_2 = 1\ k\Omega}$, $\mathbf{R_3 = 1\ k\Omega}$, $\mathbf{R_4 = 1\ k\Omega}$, $\mathbf{C = 1\ \mu F}$, $\mathbf{V_{in1} = 8\ V}$, and $\mathbf{V_{in2} = 4\ V}$.