



Given $R = 100$, $C = 100\mu\text{F}$, $V_s = 5\text{V}$, and $v_c(0) = 0$, compute values of the following variables:

Q1. Current flow through capacitor C (flowing downward) at time $t = 0.01\text{s}$, $i_c(0.01)$

Q2. Voltage across capacitor terminals at time $t = 0.01\text{s}$, $v_c(0.01)$

Q3. Voltage across capacitor terminals at time $t = 0.03\text{s}$, $v_c(0.03)$

Q4. Voltage across capacitor terminals at time $t = 0.06\text{s}$, $v_c(0.06)$

Q5. Voltage across capacitor terminals at time $t = 0.09\text{s}$, $v_c(0.09)$

Write your answers in the following format.

Q1.1. $i = 0\text{ A}$

Q1.2. $v = 0\text{ V}$

Q1.3. $v = 0\text{ V}$

Q1.4. $v = 0\text{ V}$

Q1.5. $v = 0\text{ V}$