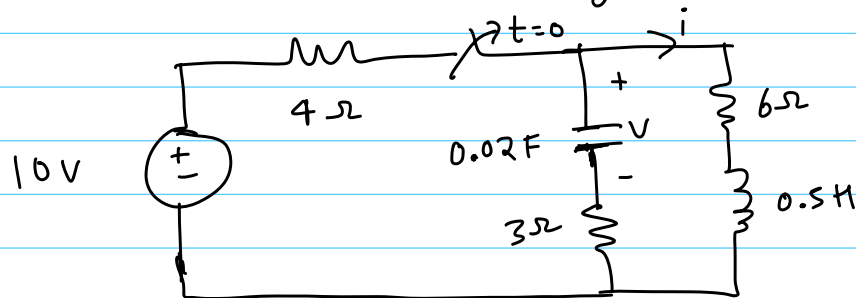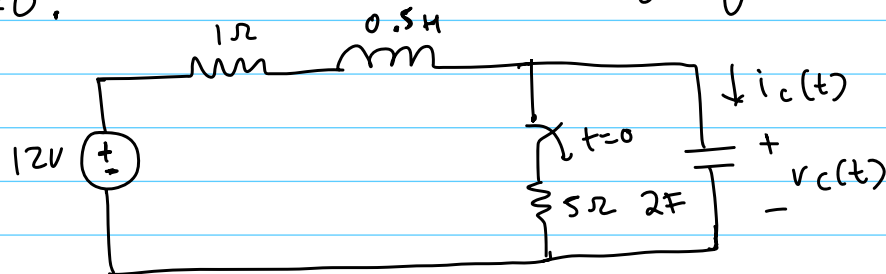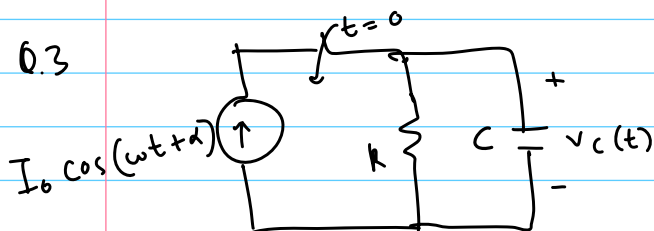Q1. Find current $i(t)$ in the circuit shown in the following figure assuming that the circuit reached the steady state at time $t=0^-$.

Q2. The switch has been closed for a sufficiently long time and it is opened at $t=0$.

Find the expression for a) $v_c(t)$ b) $i_c(t)$ for $t>0$.

Q3

Assuming $v_c(t) = V_o \cos(\omega t + \beta)$ is

Solution, find V_o & β.