TUTORIAL 2
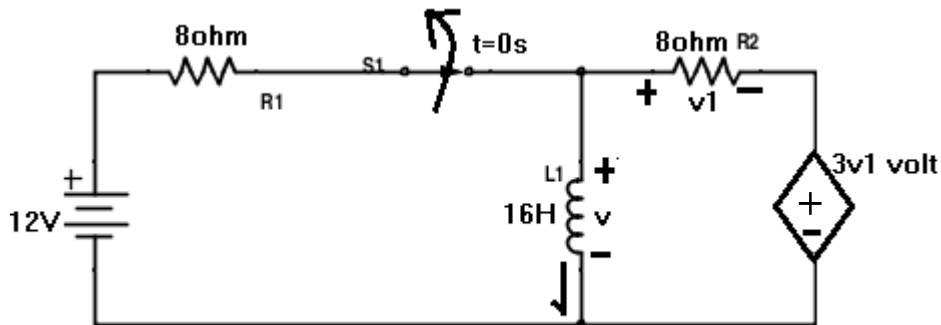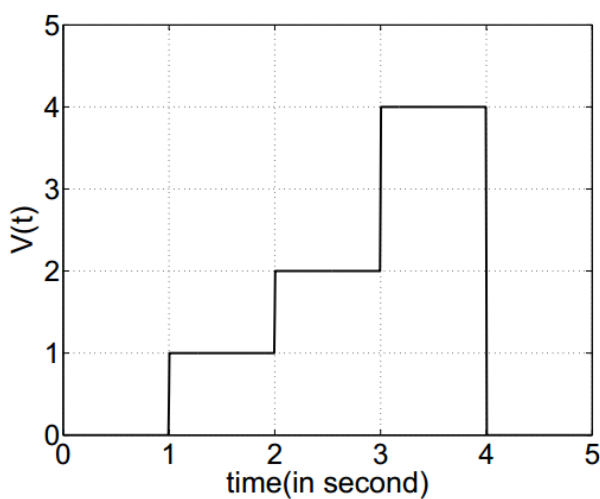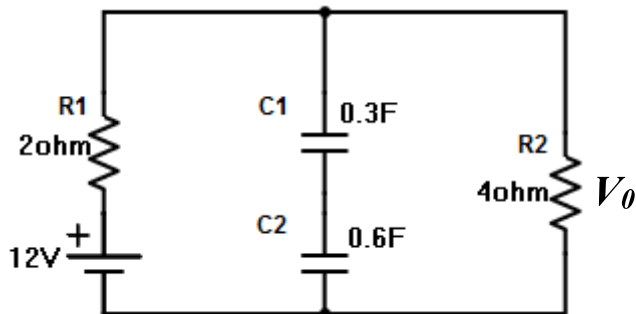
Q1) For the circuit shown in Figure below the switch opens at time $t = 0$ s. Write a differential equation *in i(t)* for *t>= 0* s. Find *i(t)* and *V(t)* for all time .
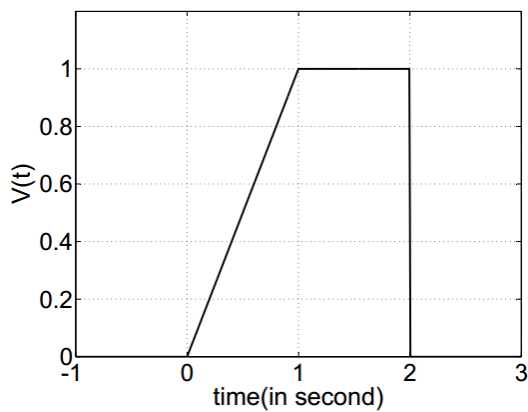

2) The staircase input voltage wave form shown in Fig. (a) is applied across a series LR circuit consisting of $R=1\Omega$ and $L=1H$. Find the current through the circuit.
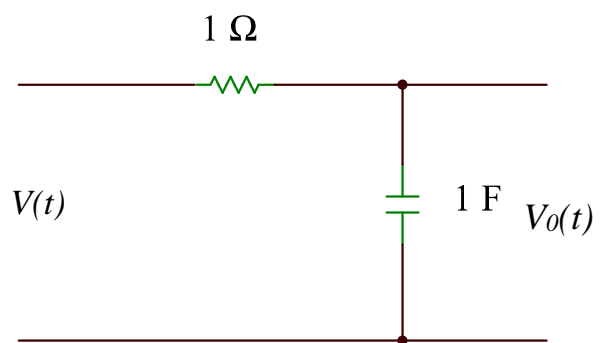
Q3) Given $V_{C1}(0^-) = 6$ and $V_{C2}(0^-) = 24$, Find V_o:

4) The input voltage wave form shown in Fig. (a) is applied across a RC circuit shown in Fig. (b). Find the output voltage across the capacitor C. Plot $i_c(t)$, $v_c(t)$.
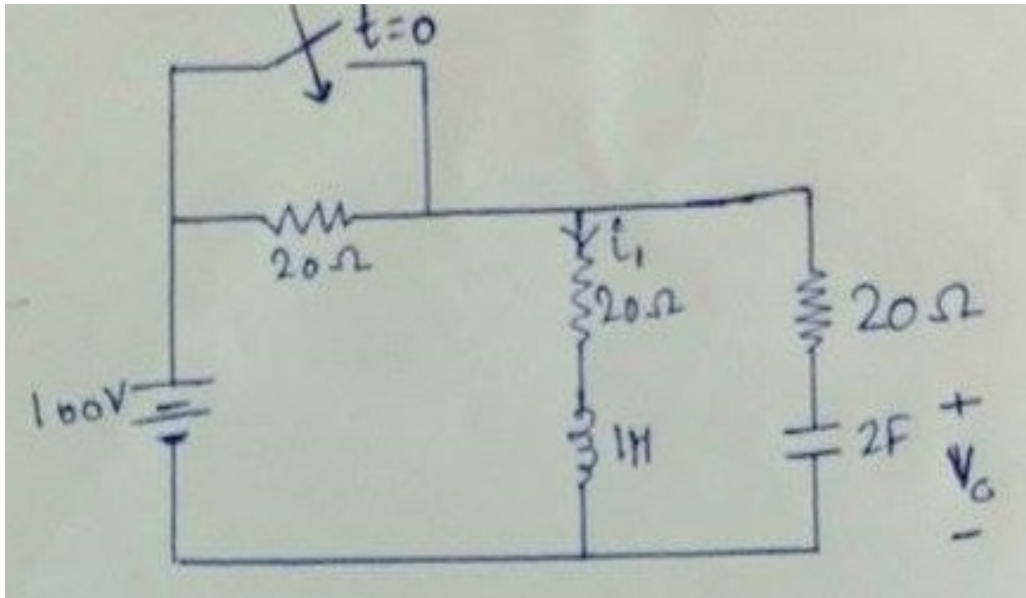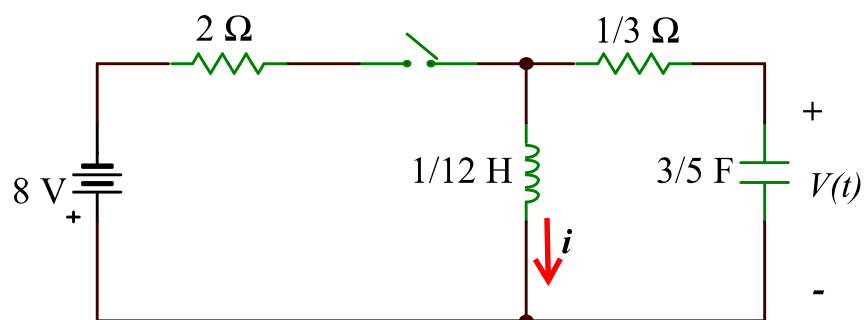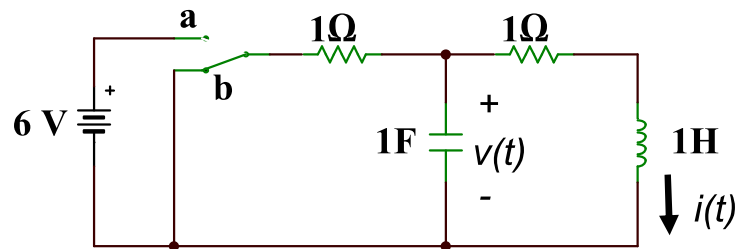

(a)

(b)

Q5) FIND $\frac{di_1}{dt}(0^+), \frac{dv_c}{dt}(0^+), i_1(0^+), v_c(\infty)$ in the below figure

6) For the circuit shown in the Fig.6 , the switch opens at time t = 0. Find V(t) and i(t) for all time.

7) For the circuit shown in fig. switch was moved from position **a** to position **b** at time t=0; Find *i(t)* and *v(t)* for t>0.

8) For the circuit shown in fig. switch was moved from position **a** to position **b** at time t=0; Find *i(t)* for t>0.