

① the Current through a 0.1 H inductor is $i(t) = 10t e^{-5t} \text{ A}$.

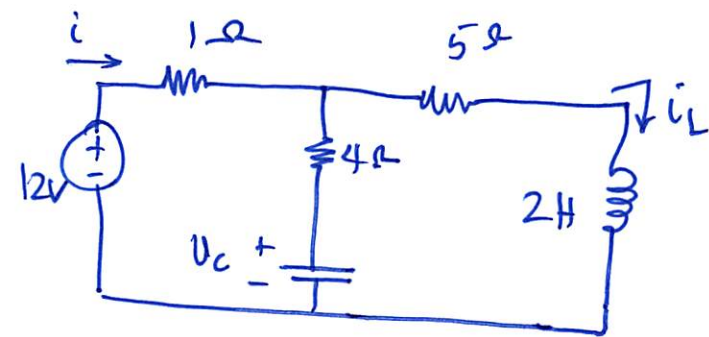
Find the voltage across the inductor & the energy stored in it.

② Find the current through a 5-H inductor if the voltage it is

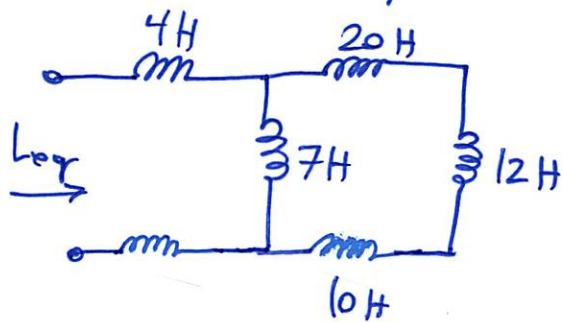
$$v(t) = \begin{cases} 30t^2, & t > 0 \\ 0, & t < 0 \end{cases}$$

Also, find the energy stored at $t=5$ s. Assume $i(v) > 0$

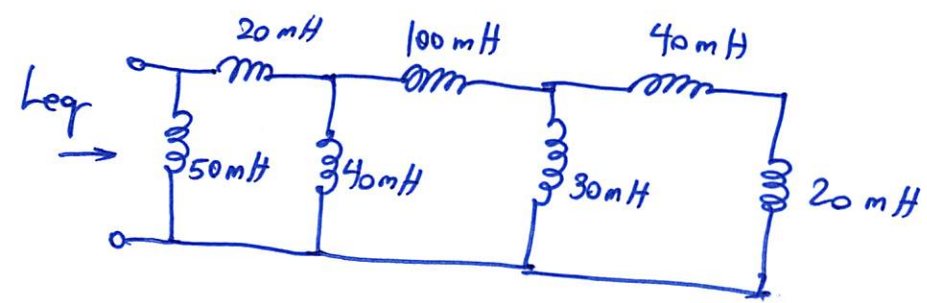
- ③ Consider the circuit. a) Find i , V_c , & i_L for DC conditions. b) the energy stored in the capacitor and inductor.



4) Find the equiv. inductance of the circuit.



5) Find L_{eq}



6) $i(t) = 4(2 - e^{-10t}) \text{ mA}$. if $i_2(0) = -1 \text{ mA}$

Find a) $i_1(0)$, b) $U(t)$, $U_1(t)$, & $U_2(t)$ c) $i_1(t)$ & $i_2(t)$

