Assignment-6

Note :- There will be one surprise question.

1. Find the steady state current i flowing through circuit when @ $f = 60Hz$ and (b) $f = 400Hz$, where $v_s = 160 \cos \omega t$ V.

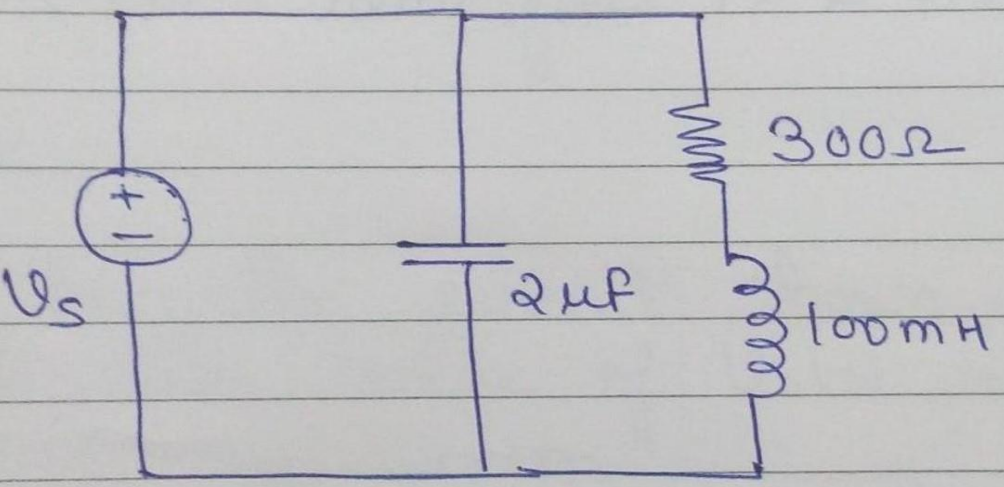


Fig: 1

2. For the circuit shown in fig 2, determine phasor currents I_s, I_C, I_L and I_R if $\omega = 1000$ rad/sec.

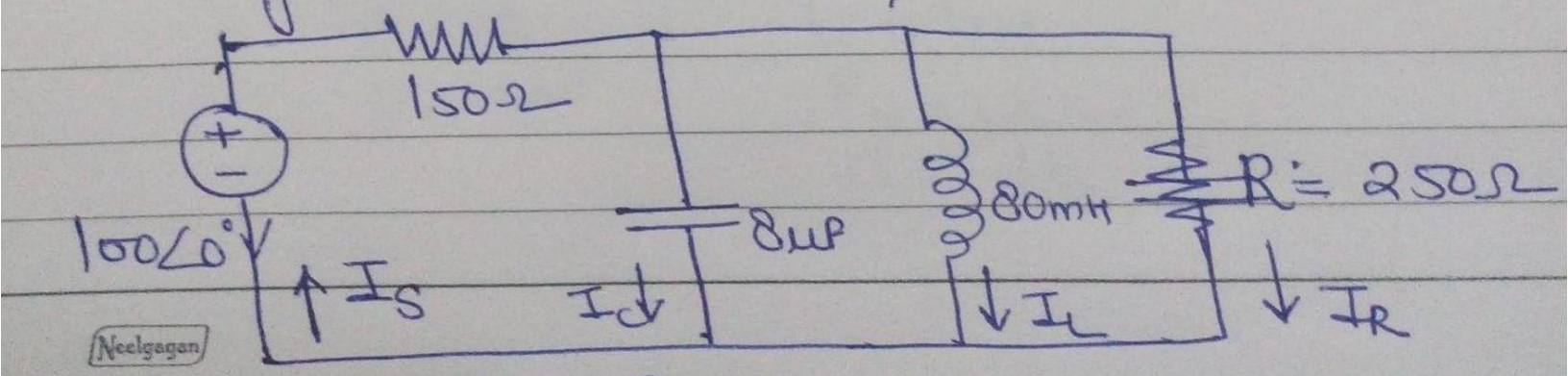


Fig: 2.

3. Find the two node voltages $V_a(t)$ and $V_b(t)$ for the circuit shown in fig 3 when $V_s(t) = 1.2 \cos 4000t$.

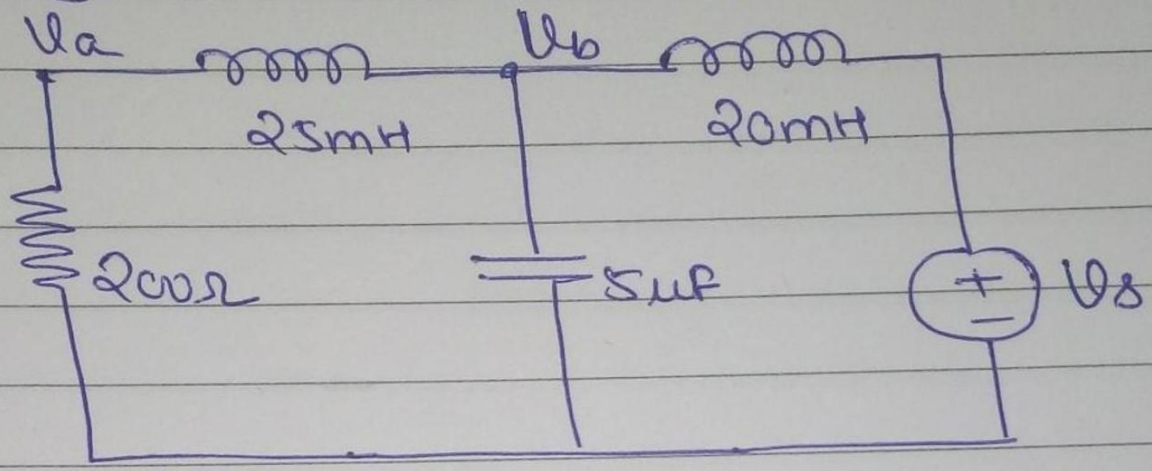
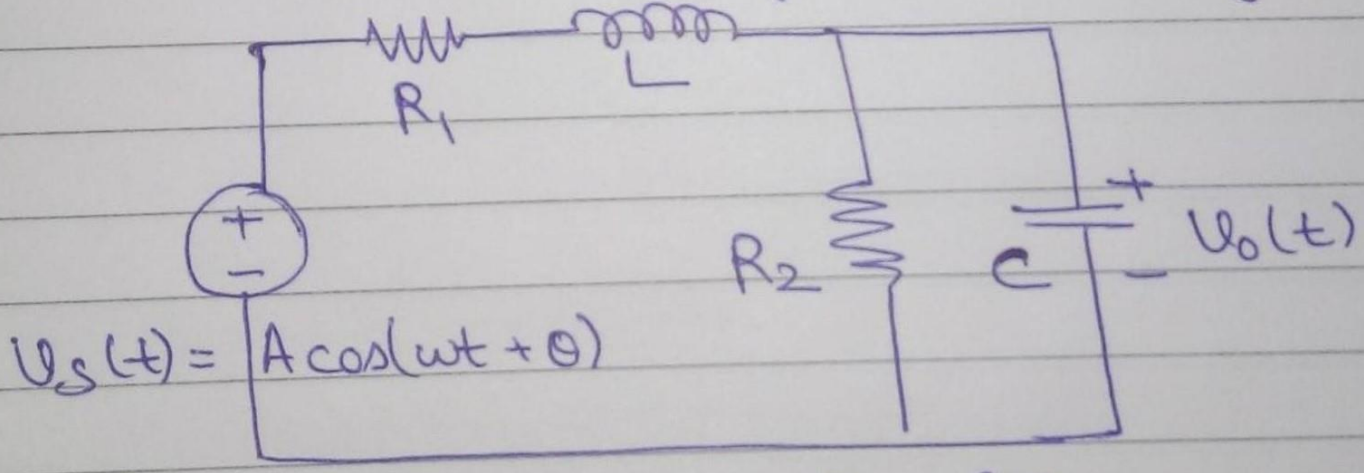


Fig 3.

4. For the circuit shown in fig 4, Calculate value of $V_o(t)$ using MATLAB



where, $\omega = 2$ $\quad R_1 = 6\Omega$

$A = 12$ $\quad L = 4H$

$\theta = 30°$ $\quad R_2 = 12\Omega$

$C = 1/24$ F