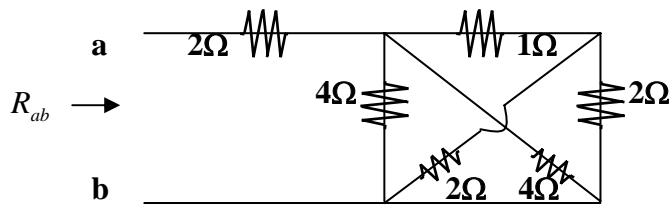


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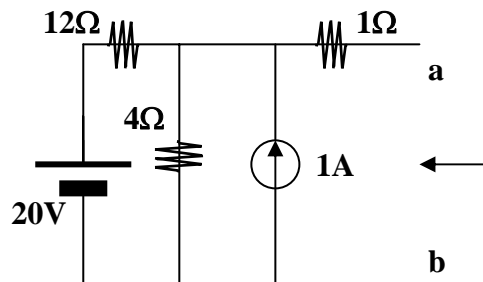
01.

Find the equivalent resistance R_{ab} . (15%)



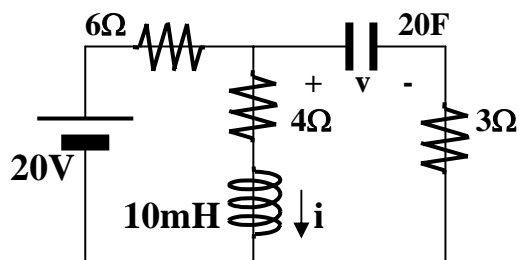
02.

Find the Thevenin equivalent circuit with respect to the terminals a, b for the circuit shown. (15%)



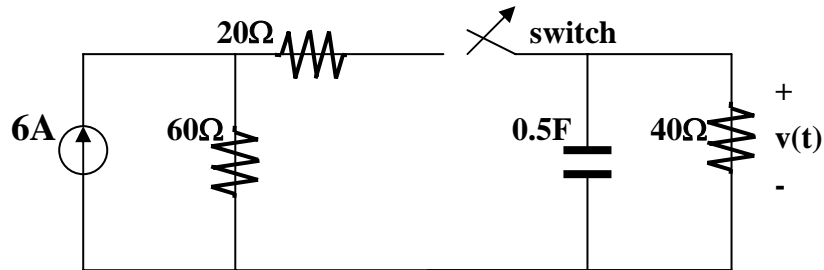
03.

The circuit has been in operation for a long time. Find capacitor voltage v and inductor current i . (15%)



04.

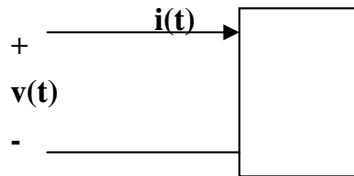
The switch in the circuit as shown has been closed for a long time before opening at $t=0$, find $v(t)$, $t \geq 0$. (15%)



05.

Calculate the (a) average power (b) reactive power (c) power factor and (d) apparent power at the terminals of the network shown in

Figure if $v(t) = 100 \cos(\omega t + 20^\circ)$, $i(t) = 10 \cos(\omega t - 10^\circ)$. (20%)



06.

Find the voltages V_1 and V_2 in the circuit shown in Figure. (20%)

