EE 1100 Basic Electrical Engineering
Mar-June 2023

Tutorial-4
Single Phase AC Circuits (a)

1) For the circuit shown in Figure 1 below , find the expression for $i(t)$.

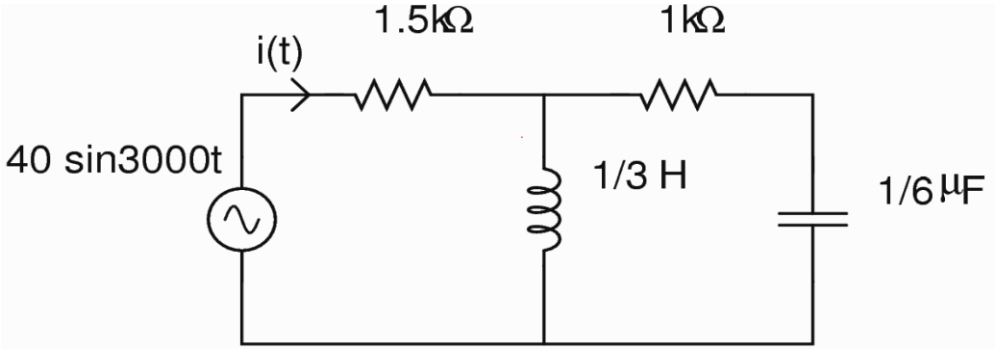

Figure:1

2) Find the steady state current $i(t)$ in below figure 2.

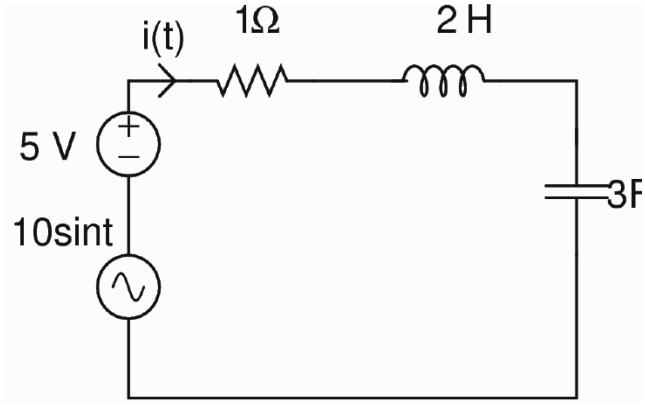

Figure:2

3) In the circuit shown below, the supply voltage is 10 sin(1000t) V. Find the peak value of the steady state current through the 1 Ω resistor

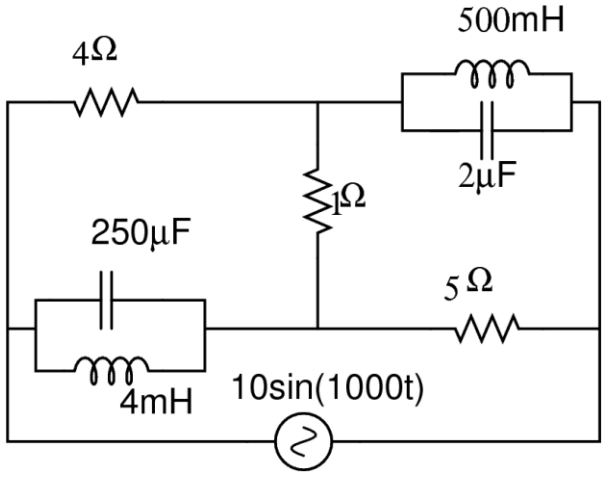

Figure:3

4) Find the branch currents Ia ,Ib and Ix as indicated in the circuit shown in figure 4, given that $I_1 = 10.6 \sin(\omega t)$ A

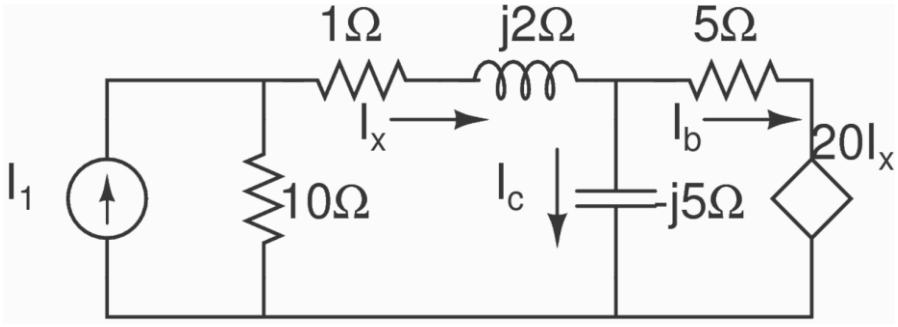

Figure:4

5) Find the steady state value of current $i(t)$ in below circuit diagram

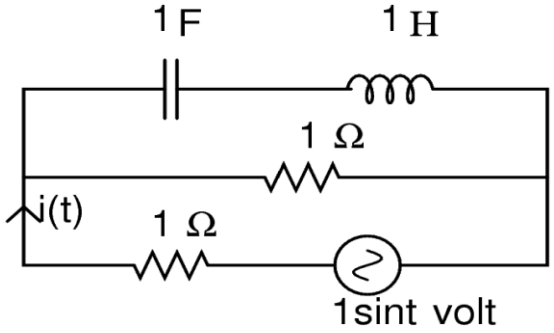

Figure:5