

Question 1

The circuit shown in Fig. 1 is in initial rest, i.e., the initial voltage of the capacitor and the initial current of the inductor are zero.

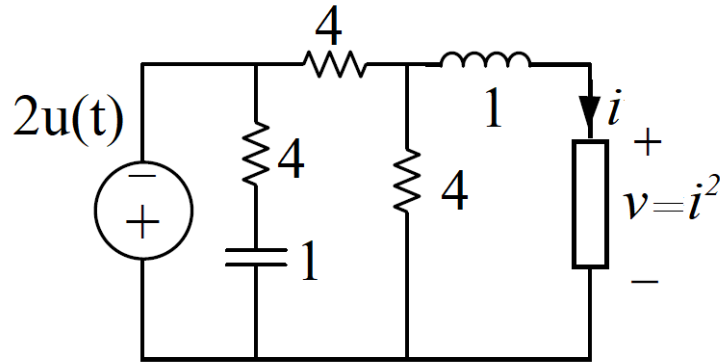


Figure 1: A circuit with nonlinear load.

(a) Find the Thevenin equivalent circuit seen from the port connected to the nonlinear load.

(b) Find $i(t)$, the current of the nonlinear load having the characteristic curve $v = i^2$.