Chapter 7, Solution 3.

Determine the time constant for the circuit in Fig. 7.83
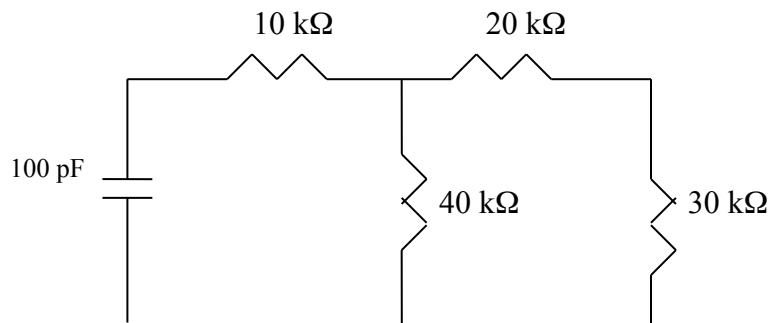

Figure 7.83
For Prob. 7.3.

Solution

R = 10 +20//(20+30)   =10 + 40x50/(40 + 50)=32.22 kΩ

$$\tau = RC = 32.22 \times 10^3 \times 100 \times 10^{-12} = \underline{3.222 \ \mu S}$$