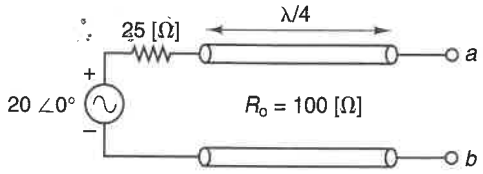

Figure P11-24

11-24 Find the Thévenin equivalent circuit of the network shown in Figure P11-24 with respect to the output terminal pair *ab*.

11-28 Using the Smith chart, determine the impedance of the load attached to a $Z_o = 75$ [Ω] transmission line if it is known that the input impedance 2 [cm] away from the load is $Z_{in} = 75 + j\,20$ [Ω] at a frequency where the wavelength on the line is 6 [cm].

11-34 Prove that the characteristic impedance of a section of uniform transmission line (lossy or lossless) can be written as

$$Z_o = \sqrt{Z_{sc} Z_{oc}},$$

where Z_{sc} and Z_{oc} are the input impedances when the output terminals are short circuited and open circuited, respectively.