Three zones of a single-phase circuit are identified in Figure 3.10(a), page 92 of your textbook. The zones are connected by two transformers T1 and T2, whose ratings are also shown in the same figure. Using base values of 20 kVA and 115 volts in zone-3 calculate the per-unit source voltage. Neglect the transformer winding resistances and the shunt admittance branches.

a.

$V_{source\ p.u.} = 0.3565\ p.u.$

b.

$V_{source\ p.u.} = 0.4565\ p.u.$

c.

$V_{source\ p.u.} = 0.7565\ p.u.$

d.

$V_{source\ p.u.} = 0.9565\ p.u..$

FIGURE 3.10

Circuits for Example 3.4