Test 1 – Circuit Analysis

Question 1 (parallel and series network)

7.5   For the network shown in Fig. 7.67: (a) Determine R_T; (b) Find I_s, I_1, and I_2; (c) Find V_a
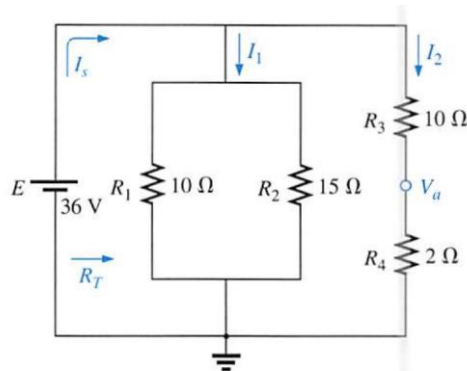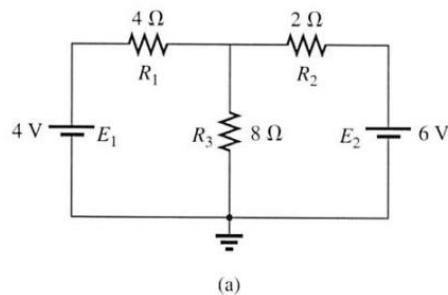

FIG. 7.67
Problem 5.
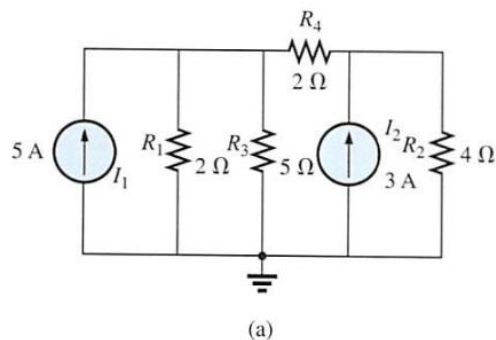
Question 2 (mesh analysis)

8-12-a   Using mesh analysis (KVL), find the magnitude and direction of the current through each of the resistor, for the circuit shown below.

(a)

Fig 8.102

Question 3 (nodal analysis)

8-32-a   Write nodal equations for the circuit shown below, and solve for all the nodal voltage points.

(a)

Fig 8.111.a

Question 4 (Superposition Theorem)

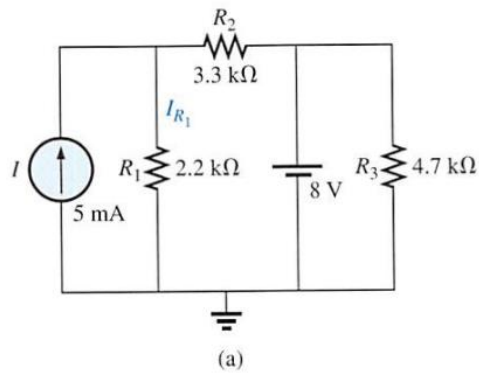9-3-a   Using Superposition Theorem, Find the current through R_1.

Fig. 9.127

Question 5 (Thevenin Theorem)

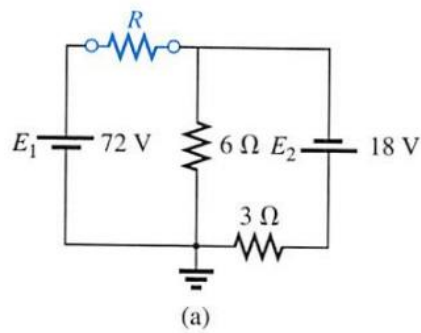9-7-a   Find the Thevenin equivalent circuit for the network external to the resistor R, in the figure shown below.

Fig. 9.131