SVKM'S NMIMS
School of Technology Management & Engineering, Navi-Mumbai Campus
B.Tech. (Sem- I) (CSBS)
Assignment-3
Subject: Principles of Electrical Engineering
Date of Submission: 21/09/2019

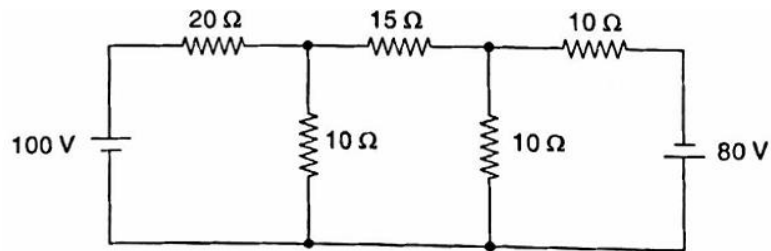Q.1   By node voltage method, find the current through 15Ω resistor in the circuit of fig.1.

Fig. 1

Q.2   By using nodal analysis find v1 and v2 for the circuit of fig. 2
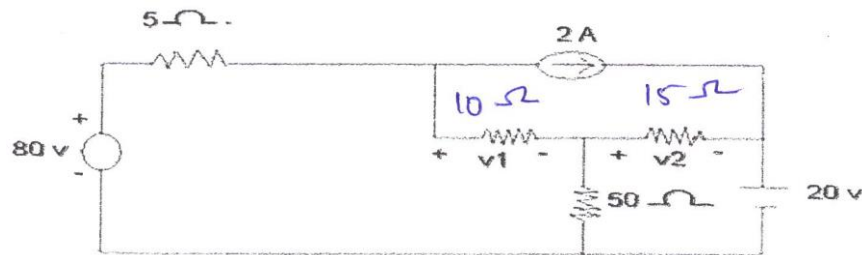

Fig. 2

Q.3   By nodal analysis, determine the voltages at node A and node B in the circuit of fig. 3.
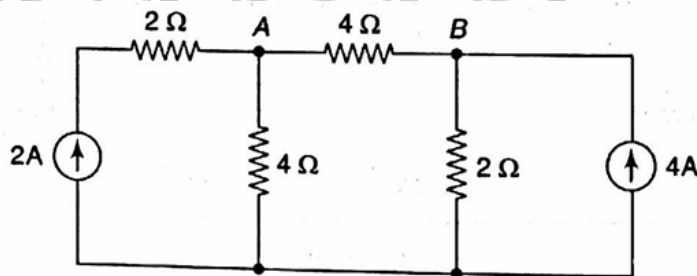

Fig. 3

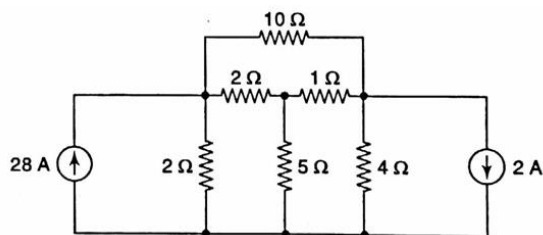Q.4   Find the currents in the various resistors of the circuit shown in fig.4.

Fig. 4

Q.5   Using nodal analysis, calculate the node voltages V_1, V_2, V_3 and power dissipated in the 6Ω resistor for the circuit of fig. 5.
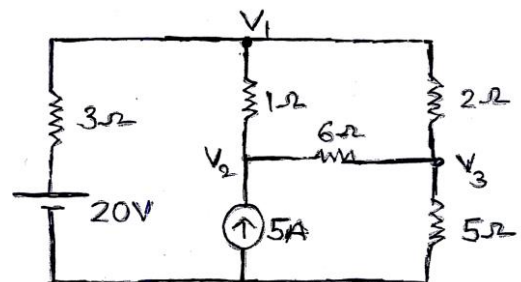

Fig.5

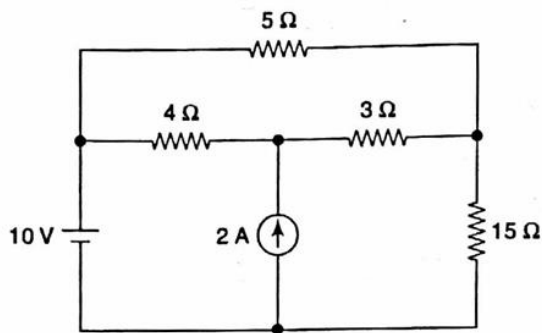Q.6 Find the current through 4Ω and 3 Ω resistances using nodal analysis in the circuit of fig.6.

Fig. 6

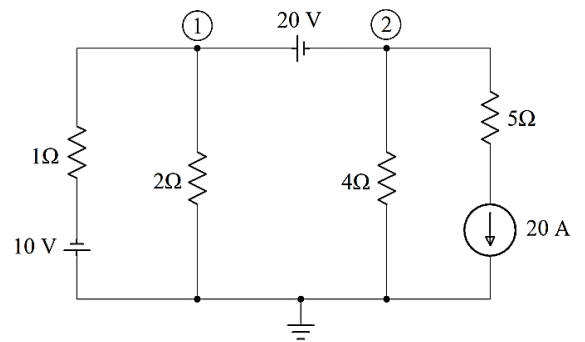Q.7 By nodal analysis, determine the voltages at node 1 and node 2 in the circuit of fig.7.

Fig. 7

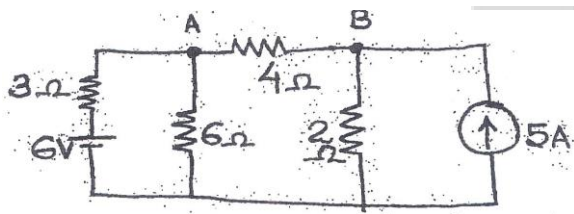Q.8 Find current trough 4Ω resistance using nodal analysis.

Fig. 8

Q.9 Determine current trough 100Ω resistance using nodal analysis for the circuit of fig. 9.
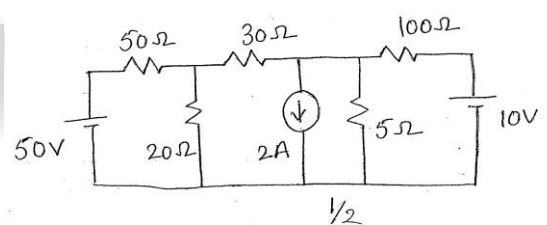

Fig. 9

Q.10 Determine the current in 1Ω resistor between A and B from the network shown in fig. 10 by superposition theorem.
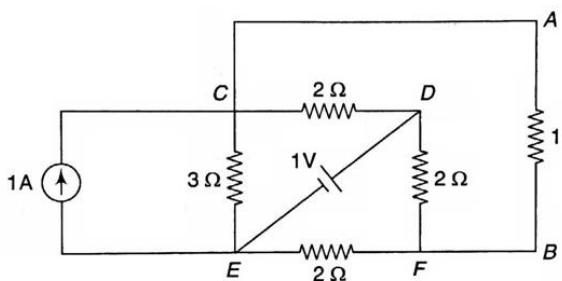

Fig. 10

Q.11 Determine the current in 20Ω resistor in the network shown in circuit below in fig. 11 by superposition theorem.
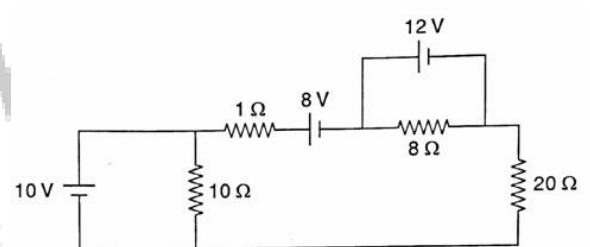

Fig. 11

Q.12 Determine the current in 1Ω resistor in the network shown in fig. 12 below by superposition theorem.
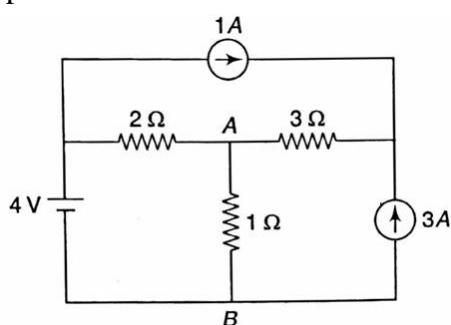

Fig. 12

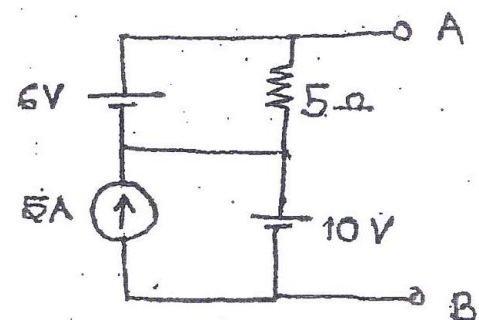Q.13 Find voltage VAB using superposition theorem for the circuit of fig. 13.

Fig. 13

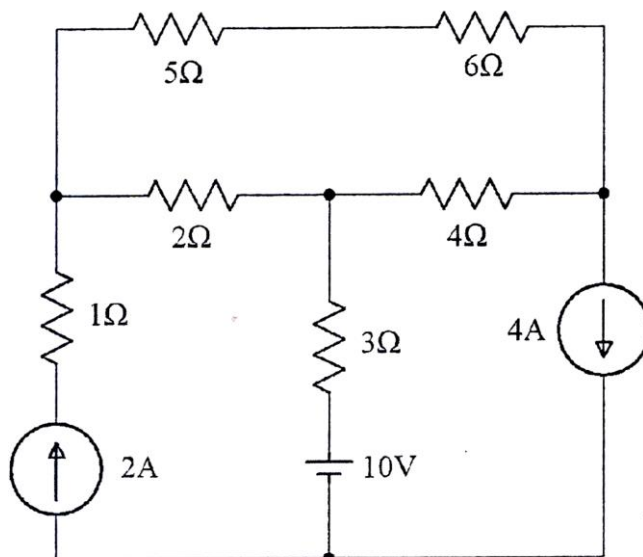Q.14 Analyze the given circuit and evaluate the current flowing trough 6Ω resistance using superpositin theorme.

Fig. 14

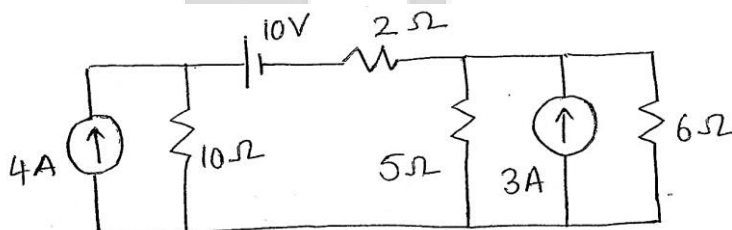Q.15 Determine the current trough 6Ω resistance using superposition theorem for the circuit of fig. 15.

Fig. 15