

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2015

B.Tech 1st Semester

COURSE CODE: 10B11EC111

MAX. MARKS: 15

COURSE NAME: Electrical Circuit Analysis

MAX. TIME: 1 HR

COURSE CREDITS: 04

- 1.a) In the circuit configuration of Fig 1, determine the number of (a) nodes, (b) meshes.

[1]

- b) Transform the wye/star network in Fig 2 to a delta network.

[2]

- c) Find the equivalent conductance of the Fig 3.

[2]

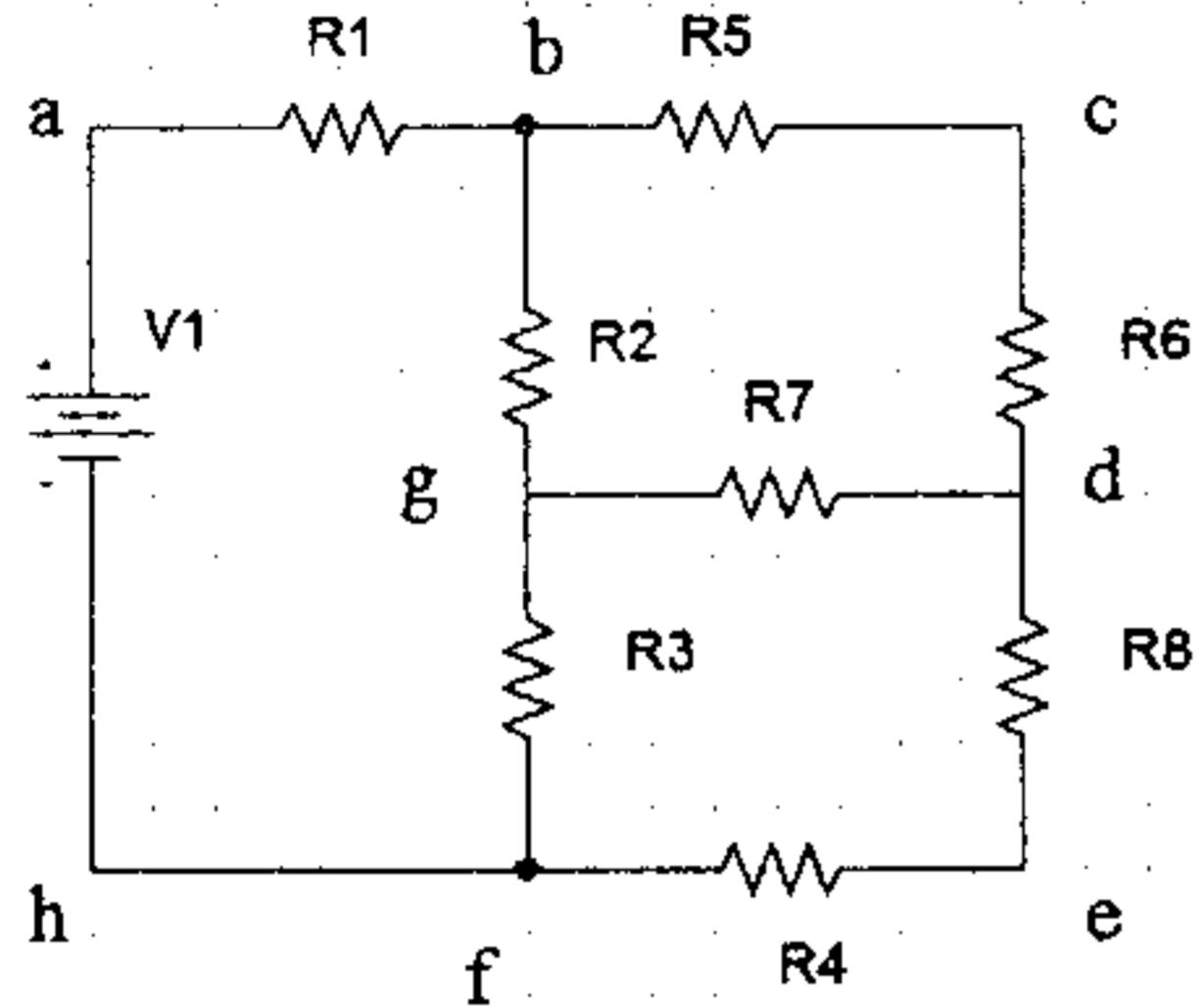


Fig 1

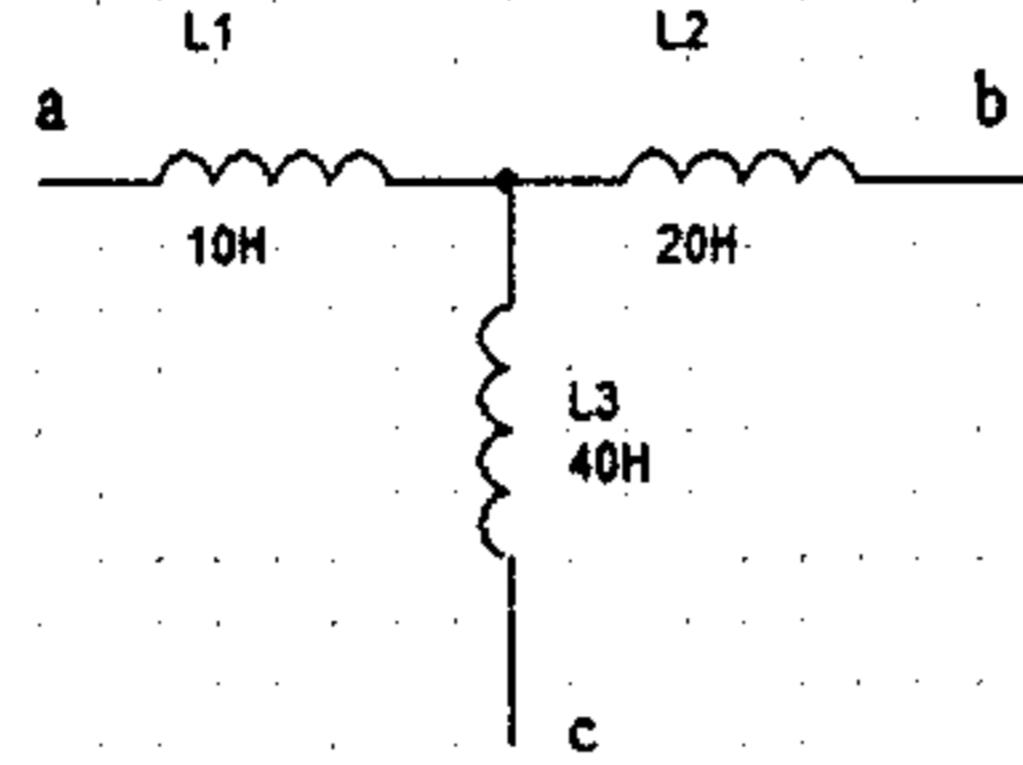


Fig 2

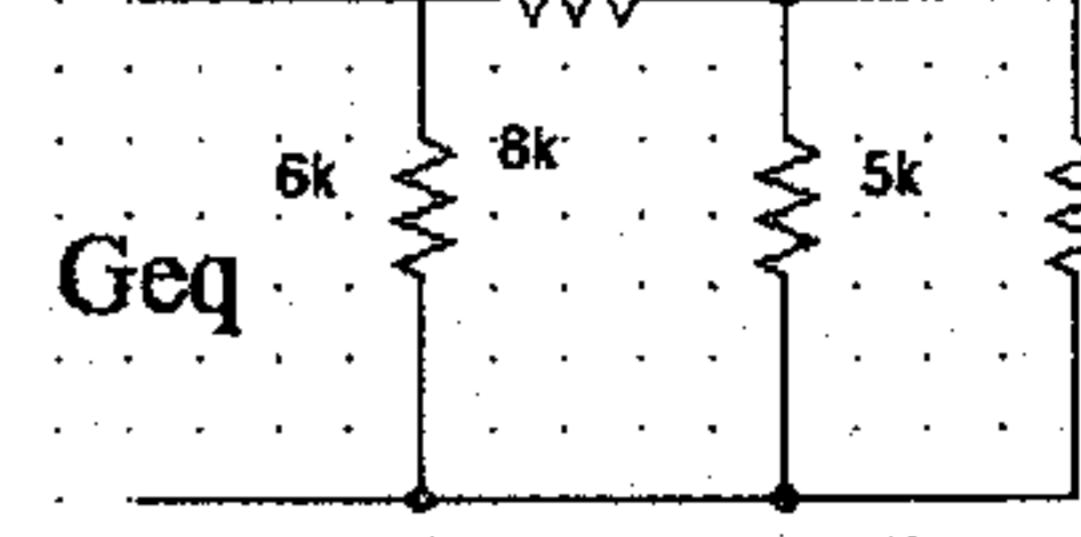


Fig 3

2. (a) For the Fig 4, determine (a) voltage v_0 , and (b) power absorbed by each resistance

[2.5]

- (b) For the circuit shown in Fig 5, find the node voltages v_1 and v_2 .

[2.5]

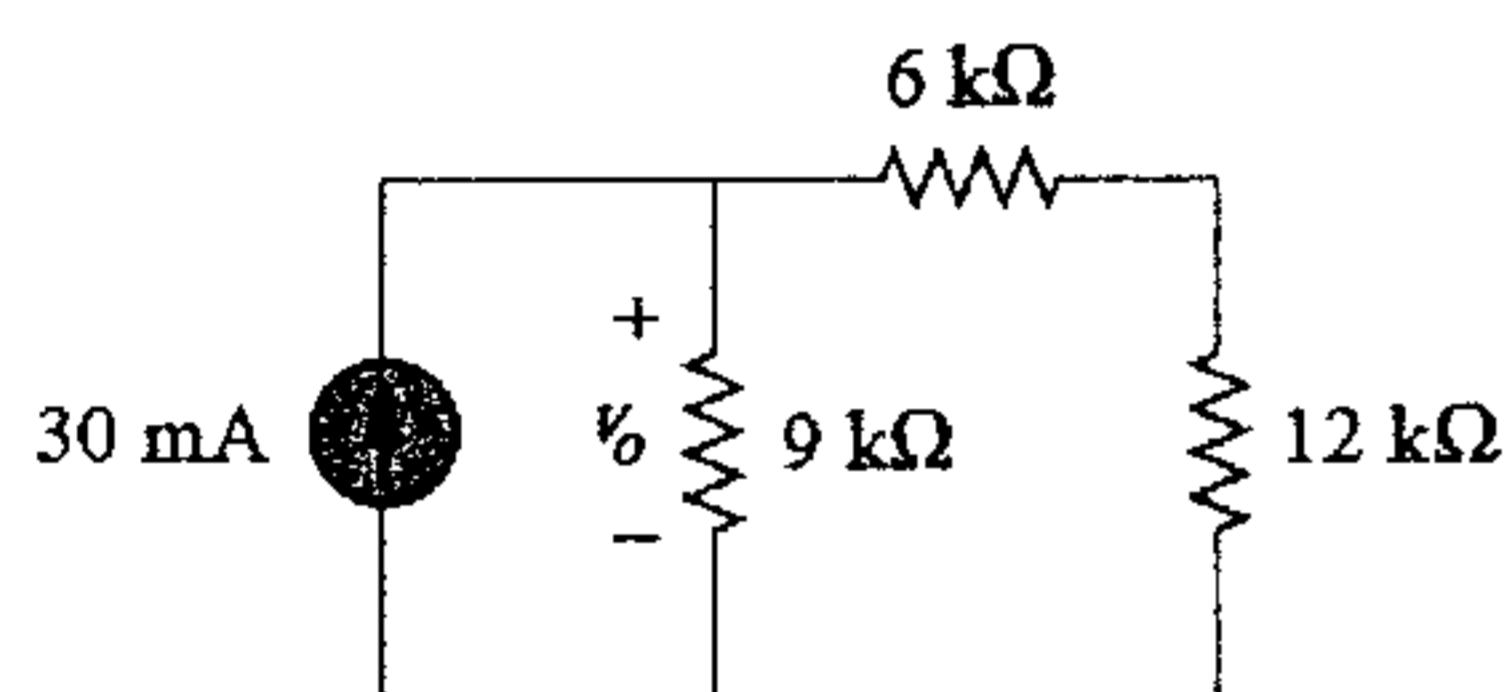


Fig 4

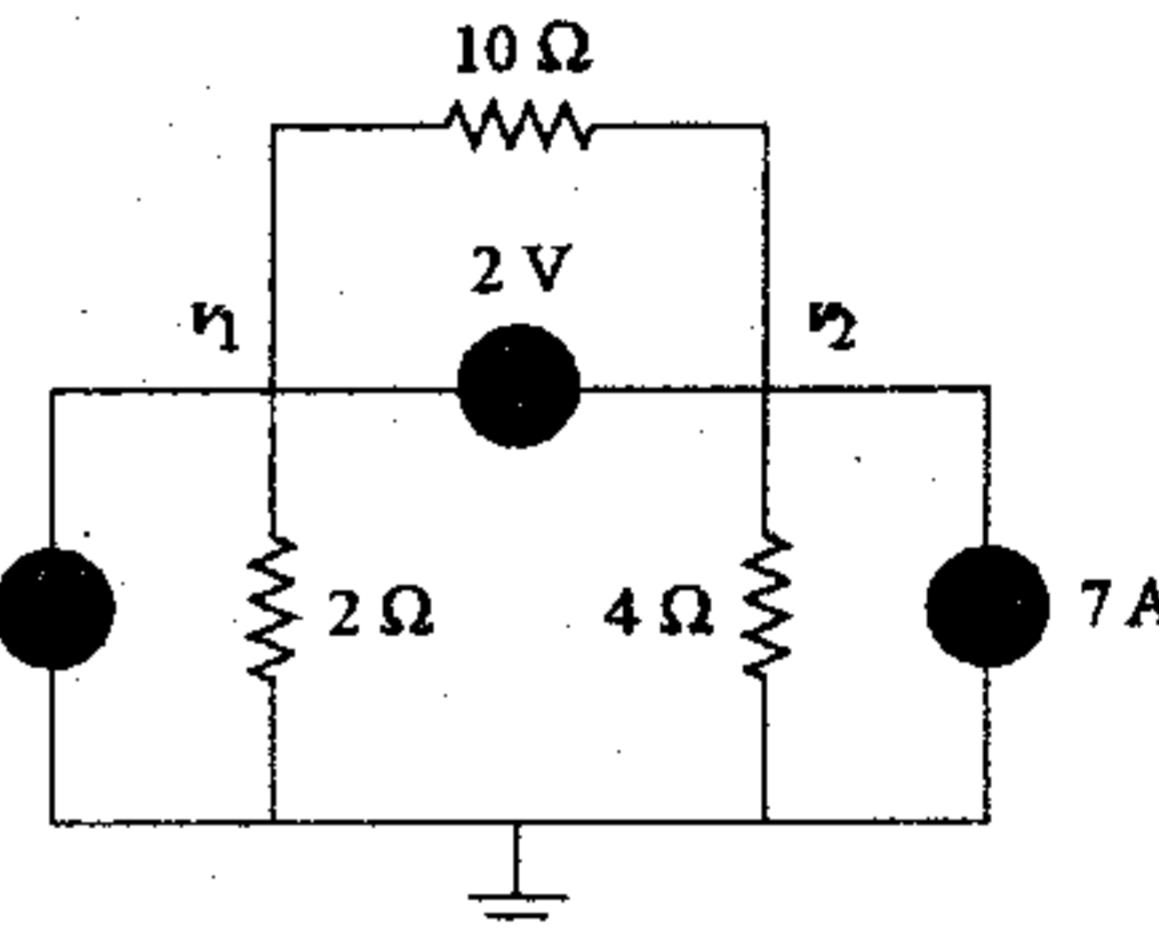


Fig 5

3. (a) Find out the unknown current i of Fig 6 using mesh analysis.

[2.5]

- (b) Calculate equivalent resistance R_{ab} in the circuit in Fig. 7.

[2.5]

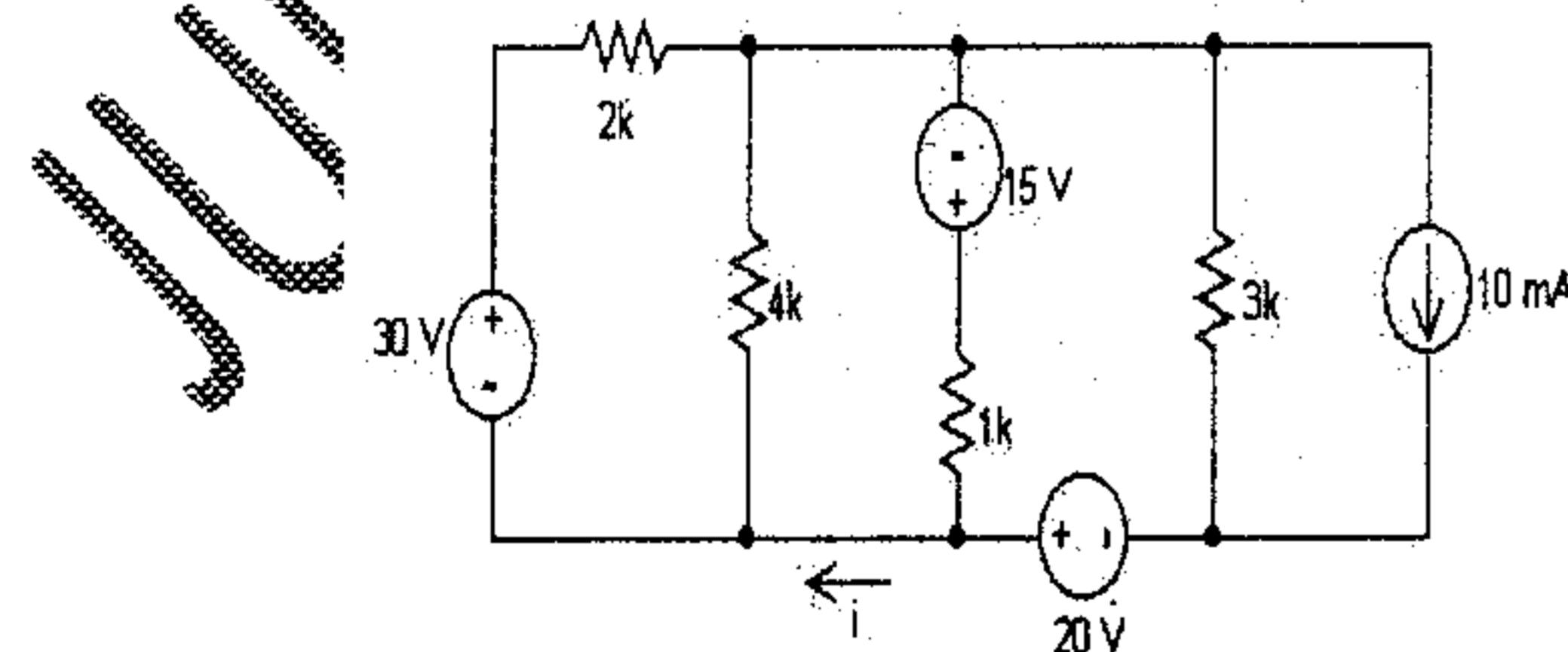


Fig 6

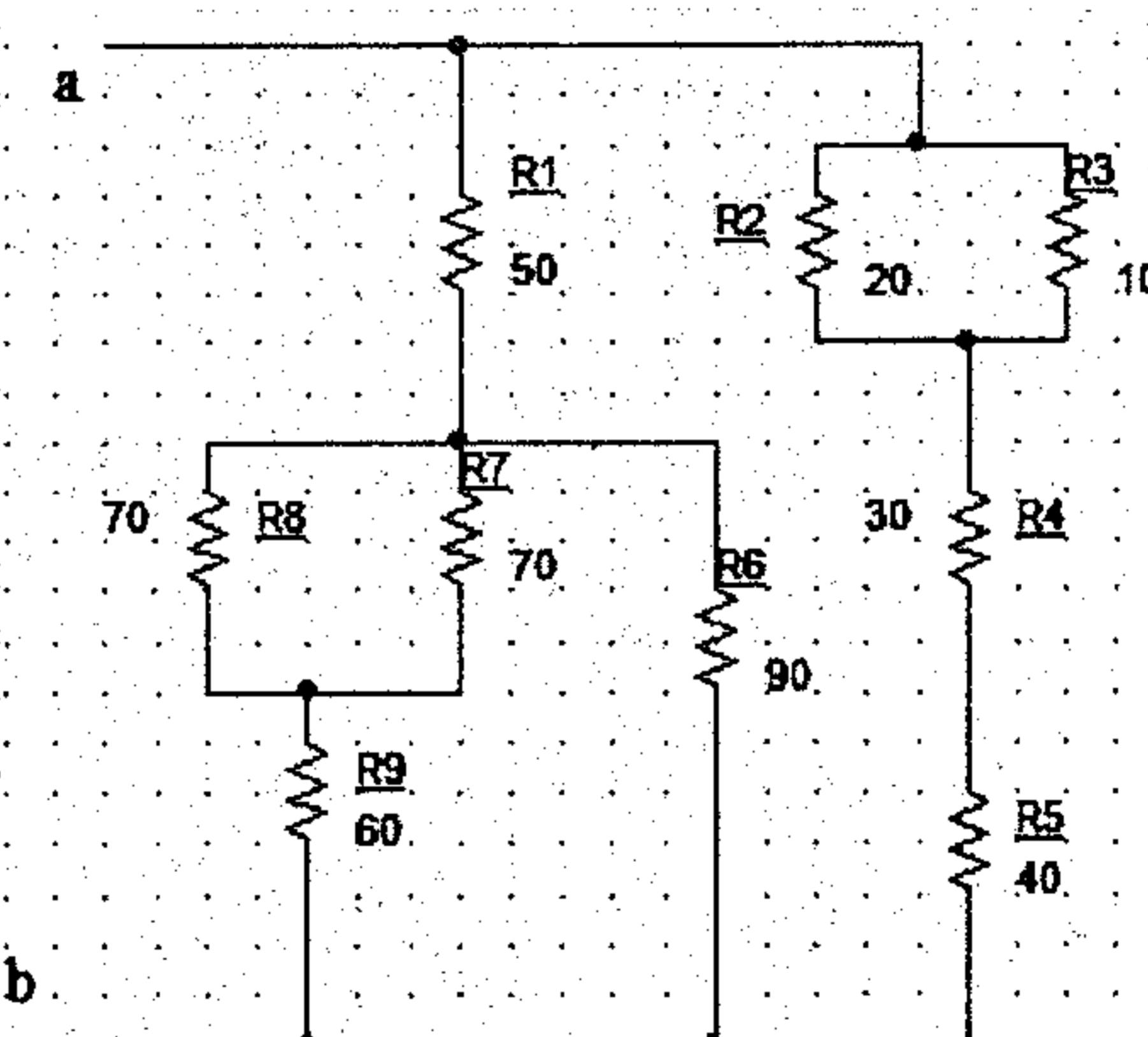


Fig 7