The University of Sheffield

Department of Electrical and Electronic Engineering

EEE117 Homework 2

1 Write down the node equations for nodes **A** and **B** in figure 1 and then express them in terms of voltages, resistors or current source values as appropriate. Assume that the reference node indicated can be taken as zero volts.

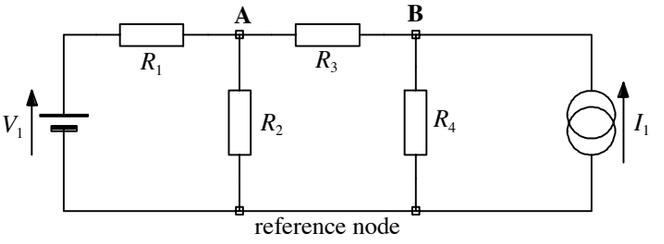

Figure 1

2 In the circuit of figure 2 a current flows around each loop as indicated. So, for example, R_3 has a single current I_B flowing through it in an upwards direction; R_1 has a current of I_B flowing through it from left to right together with a current I_C flowing from right to left, and so on.

Write down the loop equations (ie sums of voltage drops around each of the three closed loops) for the three loops in figure 2.

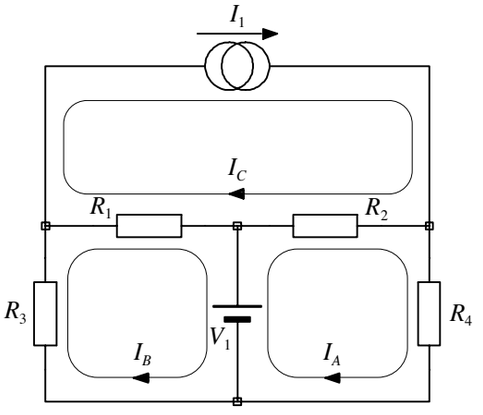

Figure 2