Cyprus International University

Department of Electrical and Electronic Engineering

Circuit Theory 1
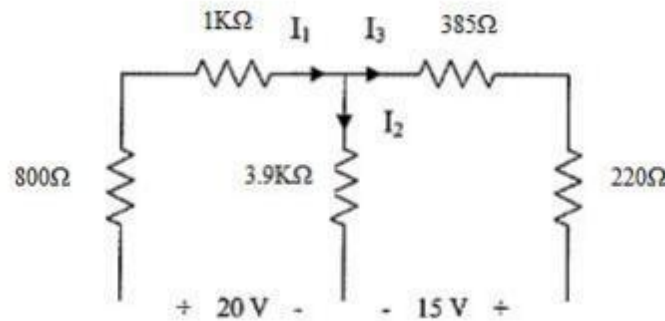## EELE202

Experiment 4
Superposition

Spring 2022-2023

Name Surname	ID
1. Abdulahi Ogunlesi	22114031
2. Rodrigue Kasongo ilunga	22114938
3. Rayan Bahumaidan	21910896
4. Matthew Osamudiamen Asemota	22012465
5.	

Object: To investigate the effects of more than one voltage source in a network.

• Construct the circuit in Fig. 1 and measure I1, I2 a and I3.

I1=0.002mA .
I2=0.005mA.
I3=0.005mA.

• Disconnect 15 V supply and construct the circuit in Fig.2 and measure I'1,I'2 2 and I'3.
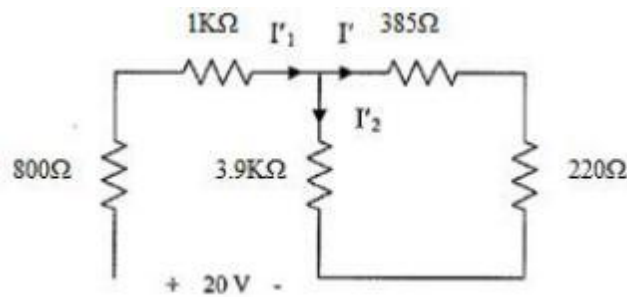
Fig.2

I'1=0.005mA .
I'2=-0.001mA.
I'3=-0.002mA.

• Disconnect 20 V supply and construct the circuit in Fig. 3 and measure 1"1, 1"2 and I"3.
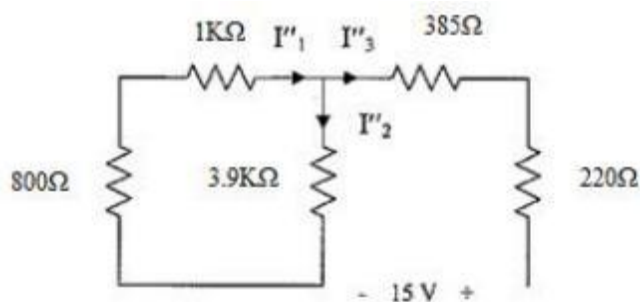
Fig.3

I" 1=-0.002mA .
I"2=0.006mA.
I"3=0.007mA.

Questions:

1. Do the current directions agree with those shown in Fig.1 ? ANS:YES

2.Again, do the directions of the currents agree with those shown in Fig.2? ANS:NO

3.Can you notice any relationship between I1 and I' 1, I" 1? ANS:YES

4.Does the same relationship hold for I2 with I' 2 and I" 2 ,also l3 with I' 3 and I" 3 ? ANS:YES

5.Does the algebraic sum of the currents due to individual source equal the total currents due to the two sources ?ANS:YES

Conclusions (write a small paragraph of what you got from the experiment):
We got the values for the I's. We had some little differences in the value due to lab error but superposition thoery was proved and the experiment was successful.