EE 251
Basic Electrical Engineering

Lab01: Ohm's Law

Date: / /

ID	Comp	Name

1. Objectives

1. Prove that resistors in series have an equivalent resistance according to Equation (1) using (3×) 1kΩ resistors rated ½W.
2. Prove that resistors in parallel have an equivalent resistance according to Equation (2) using (3×) 1kΩ resistors rated ½W.
3. Build the resistive network shown in Figure (1) and measure its equivalent resistance using all R=1kΩ rated ½W
4. On the same network, apply 10.5V DC voltage and measure the current drawn from the source

Equation (1): $$R_T = \sum_{k=1}^{n} R_k$$

Equation (2): $$\frac{1}{R_T} = \sum_{k=1}^{n} \frac{1}{R_k}$$

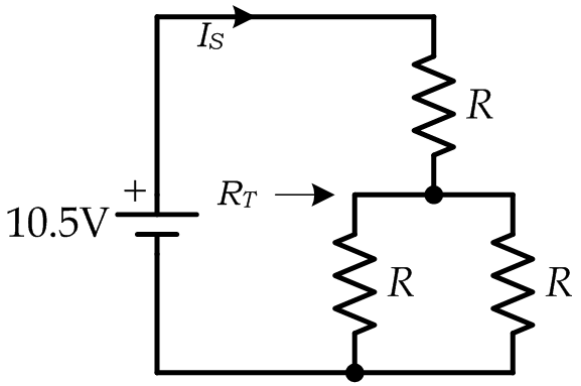

Figure (1): Resistive Network

2. Equipment

☐ DC Supply	Qty =
☐ Function Generator	Qty =
☐ Digital Multimeter	Qty =
☐ Oscilloscope	Qty =
☐ Other:	

3. Experiment Steps

Experiment (1.1):

Experiment (1.2):

Experiment (1.3):

4. Results

Experiment (1.1)

	R_1	R_2	R_3	R_T
Theoretical				
Experimental				
Error %				

Experiment (1.2)

	R_T
Theoretical	
Experimental	
Error %	

Experiment (1.3)

	R_T	V_S	I_S
Theoretical			
Experimental			
Error %			

5. Remarks

