Name: Class:

Experiment 3: Ohm's Law

Read over the lab manual and then answer the following question.

a) State the objective of the experiment.

.....

b) Identify the variables of the experiment.

Manipulated variable : .....

Responding variable : .....

Constant variable : .....

c) Theory:

i) State Ohm's Law

.....

.....

ii) For resistors in ....., the equivalent resistance is given by

$$\frac{1}{R_{eqv}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

iii) For resistors in ....., the equivalent resistance is given by

$$R_{eqv} = R_1 + R_2 + R_3$$

d) Procedures:

i) What is the first thing you need to do in this experiment?

.....

ii) What do you need to do in order to obtain different values of current, I and voltage, V?

.....

e) Data tabulation and analysis.

i) What graph do you need to plot for this experiment?

..... against .....

ii) What is the equation used to plot the graph?

.....

iii) What is the quantity represented by the gradient of the graph?

.....

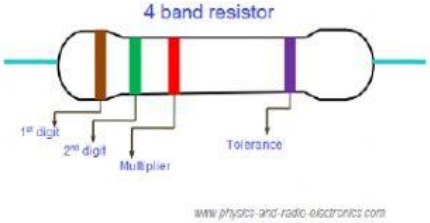
iii) How can you confirm your experimental results with the theoretical value?

.....

.....

f) Extra – Resistors Colou Codes

Determine the value of the resistors and its tolerance, based on their colour bands.



1st Band	2nd Band	3rd Band	4th Band	Value (Ω)	Tolerance
Green	Red	Brown	Silver		%
Blue	Gray	Black	Red		%
Brown	Orange	Orange	Gold		%
Yellow	Green	Black	Gold		%
Violet	Yellow	Red	Silver		%