

Experiment Report

The Digital Multimeter

Name : _____

Name : _____

TA : _____

Section : _____

This write-up follows along with the Hands On section of the lab. It requires you to write down measurements, to do simple calculations and to answer questions. You should complete this report as you do the lab exercises.

VI. Hands On

a. Resistance [15 pts]

1K Ω and 2nd resistor

Measured resistance of a 1K Ω resistor _____

Measured resistance of the 2nd resistor _____

Predicted resistance of the series combination _____

Measured resistance of the series combination _____

Predicted resistance of the parallel combination _____

Measured resistance of the parallel combination _____

Potentiometer

Measured resistance between the outside legs _____

What happened when the knob was turned while measuring the resistance between the two outside legs? _____

When you connect one outside leg and the middle leg to the DMM, does the resistance increase or decrease when you turn the knob clockwise? _____

What happens when you connect the DMM to the other outside leg and turn the knob clockwise? _____

b. DC Voltages [5 pts]

Power supply

Measured voltage across the power supply _____

c. DC Current [20 pts]

Power supply (V.L. = 5V, C.L. = .2A) and 1k Ω resistor

Measured resistance _____

Predicted current _____

Measured current _____

Power supply (Voltage = 10V, C.L. = .1A) and 51 Ω power resistor

Measured resistance

Predicted current

Measured current

Measured voltage across the resistor

Power supply (Voltage = 10V, C.L. = .4A) and 51 Ω power resistor

Predicted current

Measured current

What is the minimum resistance you would use with a current limit of 0.1A to have V=10V still?
