

Name: \_\_\_\_\_

1. Write the equation and a qualitative statement for Ohm's Law. (20 pts)

2. What are "ohmic" and "non-ohmic" devices? (20 pts)

3. Complete the following statement: An ideal ammeter has an internal resistance of \_\_\_\_\_, while an ideal voltmeter has an internal resistance of \_\_\_\_\_. Explain why these are desirable attributes for the respective measuring instruments. (20 pts)

4. If  $I$  vs.  $V$  is plotted, what value is obtained from the slope? *Note* that we are investigating the function  $I = V/R$  and fitting our data to the slope-intercept equation of a line. (40 pts)