Experiment 5: Electrical Equivalent of Heat

Student Name: _____

Section Number: _____

PRELAB

PRE-LAB Instructions:

Print out this page. Feel free to refer to the lab Instructions and other materials, your physics textbook, other students, etc. to help you to ponder, understand, and work out answers to the following question(s). Show your work & answers in the space(s) provided.

PRE-LAB Questions

1) What is meant by the expression "I^2R losses" in electric circuits?

2) Name and describe two electrical applications where:
(a) Joule heating is desirable, and (b) Joule heating is undesirable.

3) Given two different resistances, how does the rate of Joule heating in them differ if they are connected to a fixed voltage source:
(a) in series? (b) in parallel?