Experiment 7: The RC Circuit

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) The capacitor C consists of two metal surfaces separated by an electrical insulator with no electrically conductive path through it. Why does a current flow in a resistor-capacitor circuit when the switch is closed?

2) If a 100 Ω resistor is placed across a 0.10 μF charged capacitor, how long does it take it to discharge to 2 V? To 1 V?

3) How does the initial value of the current in an RC circuit depend upon the (a) resistance? (b) capacitance?