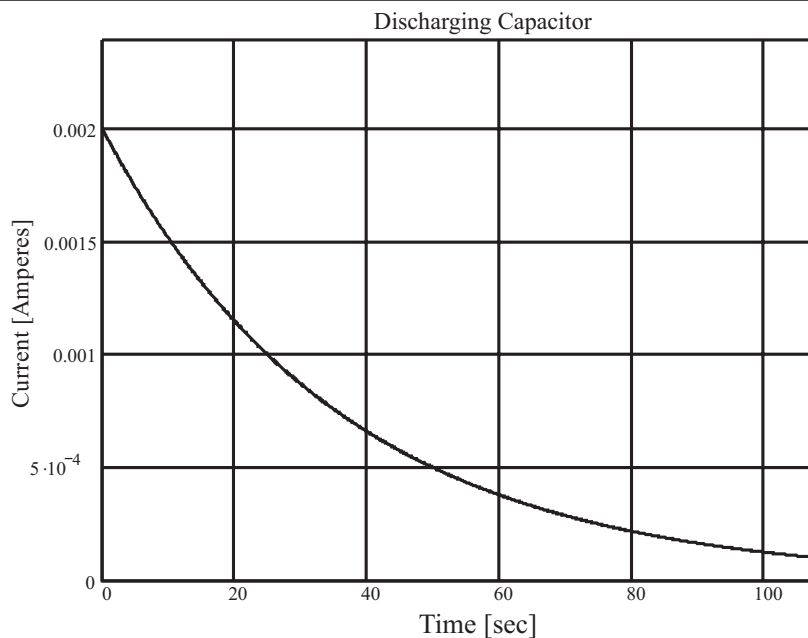


NAME _____
PERIOD _____ DATE _____

PHYSICS QUIZ #43D CAPACITANCE

A capacitor of unknown capacitance is attached to a power supply of $V_0 = 36.0$ Volts until it is fully charged. The capacitor is then removed from the battery and is then attached to a load resistance or R through a sensitive microammeter. The current flowing through the ammeter is then recorded as a function of time. These data are then plotted as shown in the graph to the right.



1. What is the value of the load resistance R ?
[3 pts]
2. What is the time constant for this circuit?
[3 pts]
3. How much charge was originally stored in this capacitor? [3 pts]
4. What is the capacitance of this capacitor?
[3 pts]
5. What will be the current flowing out of this capacitor when $t = 130$ seconds? [3 pts]