Answer Sheet

Experiment 1

A) Does the nylon rod attract or repel the pith balls? _____

B) Does the PVC rod attract or repel the pith balls? _____

C) Does the PVC rod attract or repel the pith balls? _____

D) Does the nylon rod attract or repel the pith balls? _____

Experiment 2

A) What is the charge on the white nylon rod? _____

B) Is this charge positive or negative? _____

C) Which material was the electron donor? _____

D) Which material was the electron acceptor? _____

E) What is the charge on the gray PVC rod? _____

F) Is this charge positive or negative? _____

G) Which material was the electron donor? _____

H) Which material was the electron acceptor? _____

Experiment 3

A) What charge do you measure on the white nylon rod? _____

B) What charge do you measure with the cup shorted to ground? _____

C) What charge do you measure with the cup disconnected from ground? _____

D) What charge do you measure with the rod removed from the cup? _____

E) What would happen if we repeated this experiment using the gray PVC rod and the brown wool cloth?

Experiment 4

A) What happened as soon as you finished connecting the second voltage sensor?

B) What was the voltage reading across the first lightbulb? _____V

C) What was the voltage reading across the second lightbulb? _____V

Experiment 5

A) What is the resistor's color code? _____

B) What is the resistance of the resistor? _____

C) Fill in the following table with data from the lab.

Code	Capacitance (F)	RC Time (s)	ω (rad/s)	ωRC	V_{min} (V)	V_{max} (V)	$V_{\text{min}}/V_{\text{max}}$
101	10^{-10}		377				
102	10^{-9}		377				
103	10^{-8}		377				
104	10^{-7}		377				
105	10^{-6}		377				
106	10^{-5}		377				