

Name _____ Instructor name _____

You must show and explain all work neat and organized to receive credit. Please show each step for calculations. YOU MUST TURN IN THIS SHEET to have your assignment graded.

1. (a) What does electrically neutral mean? (b) What is a Faraday ice pail? (5 pts)

2. (a) How does an electrometer differ from a voltmeter? (b) What is meant by electrical ground?
(c) What must you do before each measurement in this experiment, and why? (7pts)

3. Blue and white wands are rubbed together and held 1.35 cm apart. If the charge on the white-faced wand is $1.38 \times 10^{-10}\text{ C}$, what is the magnitude of the force each wand exerts on the other one? Is the force attractive or repulsive? State your assumptions. (8 pts)