Unit III - Electricity and Magnetism

I. Static Electricity - electronic charges flowing in _____.

A) **Electricity of the Atom** - Electrical Charges come from the atom
Atoms are ordinarily neutral (#protons = _____)

Charge of electron = _____Coulombs

1. *** Atoms become charged by gaining or losing_____.

Na^{+1} F^{-1}

Why are _____ by an atom??

a) **Ion** – _____

- Negatively charged ion - _____
- Positive charge _____

2. Charged objects lose their charge when they are_____

3.

- _____ charged object _____when grounded to become neutral.
- _____ charged object _____ when _____to become _____.

B. **Detecting electric fields.**

1. Electroscope - used to detect presence of _____.

a) if no charge is present leaves point _____

b) leaves _____in presence of charge.

C) Transfer of charge

1. Charge can be transferred between neutral objects by friction.

Ex) hard rubber rod rubbed with fur or wool causes electrons to be transferred to rod.

Rod - _____ _____ charge

wool, fur - _____ _____ charge

2. **Con**duction - charging object through **con**tact with a charged body.

Case I – Contact with a **negative** charging body

1. Neutral Electroscope 2. Contact with negative rod 3. Removal of Rod

Case II – Contact with a **positive** charging body