

## Physics Review Unit 9 (Ch 17) - Electrostatics

1. Fully explain processes of charge Polarization, charging by conduction, charging by induction, charging by friction.
2. Compare and contrast Insulators and Conductors, with examples
3. demonstrating the charge distribution and movement (or lack of) of charges inside. For example: how are the charges distributed in a Conductor in electrostatic equilibrium?
4. Calculate the magnitude and determine the direction of the electric force on a charged particle (like protons and electrons) due to other charged particles.
5. Calculate the magnitude and determine the direction of the electric field present when produced by a single charge or multiple charges.
6. Calculate the magnitude and direction of the force on a charged particle when placed into an electric field.
7. Be able to draw the Electric field lines around combinations of charges, as well as - that of a parallel plate capacitor.
8. Conservation of electrical charge
9. Compare and calculate the electric field forces and gravitational field forces...know how they change with changes in the factors involved.
10. Be able to use the observations of repulsion and attraction to determine the charge on objects being observed.
11. Be able to describe how lightning and lightning rods work.