

EXAM 1 : Terms and Concepts to be emphasized on the Exam You are responsible for all material in the assigned readings, but the list below covers the major areas on which you will be tested from CH 15, 16, and 17.

Rules for Electric charge interaction (like vs unlike)

Methods of charge transfer (how do you create a “net” charge?)

Conservation of electric charge

Conductors vs insulators

Electric Force (magnitude and direction between charges) [ is Coulomb’s Law]

Electric Field (magnitude and direction in the space around a charge)

Electric Potential (both in general and in the form of “absolute” potential for a point charge)

Electric Potential Difference (note sign for direction: low to high potential vs high to low potential)

Electric Potential Energy (and connection to operation of a Capacitor)

Work done on electric charges (relation to potential energy)

Capacitance (and the process of charging a capacitor)

Current

Resistance

Resistivity

Physical properties of capacitors and resistors (dependence on dimensions of device)

Ohm’s Law

Electric Power (applications for devices: hair dryers, light bulbs, etc.)