

College Prep Chemistry of the Earth System

Assignment 3I

20 Points

The Energy of Ions

Answer the following questions

1. What is the octet rule for an atom?
2. Explain what is occurring (*lose/gain*), the p^+/e^- relationship and the charge of the following ion:
 - a. Cation
 - b. Anion
3. Define the following energy attributes for the movement of e^- in an atom:
 - a. Ionization Energy
 - b. Electron Affinity
 - c. Electronegativity
4. For the following atoms complete the following chart:

| Atom | Val e^- (<i>neutral</i>) | Ion Charge | Val e^- (<i>ion</i>) | Type (<i>an/cat</i>) |
|------|---------------------------------|---------------|-----------------------------|---------------------------|
| Mg | | | | |
| K | | | | |
| Al | | | | |
| P | | | | |
| O | | | | |
| Br | | | | |