**Short Answer Midterm Review: General Chemistry**

1) What are Dalton’s five laws? Which are correct?

2) Sketch the Bohr model of the atom and label the nucleus, orbitals, electrons, ground state, and excited state.

3) Explain the process by which light is emitted from an atom.

4) What is spectroscopy and how does it work?

5) What is the octet rule? How does it affect the formation of ionic compounds?

6) Why do ionic compounds only conduct electricity when they are melted or dissolved in water?

7) If an isotope has an atomic mass of 50 amu and an atomic number of 23:

* How many protons does it have?
* How many neutrons does it have?
* How many electrons does it have?

8) White out the electron configurations of:

* lead (Pb)
* phosphorus (P)

9) Write the names of the following compounds:

* Pb(OH)2
* Na2SO3
* AgOH

10) Write the formulas for the following compounds:

* vanadium (III) sulfide
* zinc nitrate
* sodium phosphide

11) Why do metals have a higher conductivity at room temperature than metalloids and nonmetals?

12) Under what conditions do metalloids conduct electricity?

13) If you were forced to breathe a gas that was not oxygen for thirty seconds, what gas would you breathe and why?