

Name _____

Period _____

**Chemistry Practice Test
Periodic Table**

Form P

Part I: Define the following terms.

Metal

Non-metal

Metalloid/Semi-metal

Isoelectronic

Family

Group

Period

Shielding

Cation

Anion

Atomic radii (what is its trend?)

Ionic radii (what is its trend?)

Ionization energy (what is its trend?)

Electron affinity (what is its trend?)

Part II: Answer the following questions either true or false.

1. _____ The s and p orbitals of the noble gases are always empty.
2. _____ The electron configuration of an atom is related to its reactivity.
3. _____ The ionization energy of the noble gases is very low.
4. _____ The atomic radii for elements on the right side of the periodic table is very large.
5. _____ An alkali metal will have a very high first ionization energy.

Part III: Matching. Match the following statements with the family that they best represent.

- A. Alkali Metal B. Alkaline Earth Metal C. Halogens D. Noble Gas
E. Transition Metals

1. ____ Brittle metals that react with acids to form hydrogen gas.
2. ____ Reacts violently with water
3. ____ All clear, colorless, odorless gases.
4. ____ Fluorine, chlorine, bromine, iodine, and astatine.
5. ____ Very colorful and sometimes expensive metals.
6. ____ Rubidium
7. ____ Burns in air to form oxides with the formula of MO.
8. ____ Copper
9. ____ Almost always never react.
10. ____ Calcium

Part IV: Draw electron configurations for the following Ions and tell which noble gas it is isoelectronic with:

- | | |
|---------------------|----------|
| 1. Br ⁻ | 1. _____ |
| 2. O ²⁻ | 2. _____ |
| 3. Al ³⁺ | 3. _____ |
| 4. Li ⁺ | 4. _____ |
| 5. N ³⁻ | 5. _____ |

Part V: Lab Stuff

After performing an experiment the following data was recorded for a procedure dealing with chemical reactivity. Aqueous solutions of diatomic elements were mixed with sodium salts of the same elements. N.R. stands for no reaction and ppt. means a precipitate was observed.

	X ₂ (aq)	Y ₂ (aq)	Z ₂ (aq)
NaX	N.R.	Reaction	Reaction
NaY	N.R.	N.R.	Reaction
NaZ	N.R.	N.R.	N.R.

True/False

1. Element Z is the most reactive element.
2. Element X cannot be replaced in a chemical reaction.
3. The activity series for this family is Z > Y > X
4. Write balanced chemical equations for the three reactions that occurred.