**Chemistry A Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Periodic Table Review Period\_\_\_\_\_\_**

**Objective One**

1. How many protons does calcium have?
2. How many electrons are in a neutral atom of argon?
3. How many electrons in a neutral atom of copper?
4. What subatomic particles are used in the calculation of the atomic mass of an atom?

5. What particles are used in the determination of atomic number of an atom?

**Objective Two**

Your knowledge of the periodic table (structure, trends, general properties) will be assessed in this objective. Examples:

1. What determines stability for an atom and which atoms are the most stable?

2. Atoms with 2 valence electrons are found in which group (name and number)?

3. What are the general properties of metals? Where are the nonmetals on the periodic table?

4. How does electron affinity and ionization energy compare to atoms in the same period (what is the trend)?

a. Which atom has the highest electron affinity?

C or F Cl or I Ca or Se

b. Which atom has the highest ionization energy?

O or B Rb or Li P or Cl

5. How does electronegativity and atomic radius compare in atoms in same group (what is the trend)?

a. Which atom has the lowest electronegativity?

F or Br K or As N or Ne

b. Which is the smaller atom?

Na or Li Sb or P Br or Ca

**Objective 3**

1. Write the electron configuration, orbital and electron dot notation for the atoms

1. Oxygen
2. Barium
3. Bromine

2. How many electrons can be found in an s sublevel? How many electrons can be put in the p sublevel?

**Objective Four**

Write the nuclear symbol for each of the following isotopes.

a. carbon-14

b. zinc-68

2. . A piece of plant material taken from the tar pits in Southern California is found to have a C-14 content 1/256th that of plant material today. How old is the plant material from the tar pits? The half-life of C-14 is 5720 years.

**Chemistry Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Periodic Table Review Period\_\_\_\_\_**

1. The atomic number of silicon is \_\_\_\_\_\_\_\_\_\_.

2. An aluminum atom has \_\_\_\_\_\_\_\_\_\_ protons.

3. A sulfur atom has \_\_\_\_\_\_\_\_\_\_ protons.

4. The chemical symbol for gold is \_\_\_\_\_\_\_\_\_\_.

5. An atom of uranium has \_\_\_\_\_\_\_\_\_\_ protons.

6. The oxidation number of oxygen is \_\_\_\_\_\_\_\_\_\_.

7. The oxidation number of potassium is \_\_\_\_\_\_\_\_\_\_.

8. The oxidation number of chlorine is \_\_\_\_\_\_\_\_\_\_.

9. At room temperature, Mercury is a \_\_\_\_\_\_\_\_\_\_.

10. A calcium atom has \_\_\_\_\_\_\_\_\_\_ electron energy levels.

11. The *p* sublevel has \_\_\_\_\_\_\_\_\_\_ orbitals.

12. Sodium is in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ family of elements.

13. Chlorine is in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ family of elements.

In the blank before each question, place a plus (+) for true or a zero (O) for false.

\_\_\_\_\_\_\_ 14. Arsenic is a metallic element.

\_\_\_\_\_\_\_ 15. Iron is a transition element.

\_\_\_\_\_\_\_ 16. Barium has an oxidation number of minus one.

\_\_\_\_\_\_\_ 17. Most of the elements on the periodic table are nonmetals.

\_\_\_\_\_\_\_ 18. Sodium is more active than potassium.

\_\_\_\_\_\_\_ 19. Chlorine is more active than iodine.

\_\_\_\_\_\_\_ 20. The *d* sublevel has 10 orbitals.

\_\_\_\_\_\_\_ 21. A normal copper atom has twenty five electrons.

\_\_\_\_\_\_\_ 22. A mercury atom has five electron energy levels.

\_\_\_\_\_\_\_ 23. There are thirty five neutrons in a chlorine atom.

\_\_\_\_\_\_\_ 24. All Noble Gases have a full outer energy level.

\_\_\_\_\_\_\_ 25. Iron is more active than zinc.