**Unit 2 Review Questions Last Name, First Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_ Section: Notes**

**Classifying Matter**

1. Atom

Element

Compound

Mixture

Homogenous Mixture

Heterogeneous Mixture

2. What holds together two atoms making up an element?

3. How is the chemical formula for a mixture different from the chemical formula for a molecule?

4. Do all the atoms of a molecule have to be the same?

5. What do subscripts on a chemical formula indicate (example: H2O)?

**Periodic Table History**

6. How did Mendeleev arrange the elements on the periodic table he created?

7. How is the modern periodic table arranged?

8. Why are some of the chemical symbols different from the first letters of the element they are representing?

**Subatomic Particles:**

9. What is the charge on:

proton \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

neutron \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

electron \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. What is the mass of: (in amu!)

1 proton: \_\_\_\_\_\_\_\_\_\_\_\_

1 neutron: \_\_\_\_\_\_\_\_\_\_\_

11. Where is the majority of the mass of an atom located? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Atomic Mass = \_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Which subatomic particles are located in the nucleus of an atom? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. Where are the electrons located? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Periodic Table**

Please complete the following tables with the correct answers.

|  |  |  |  |
| --- | --- | --- | --- |
| Table 1 | Same particles as atom | Different number of particles than atom | Is atomic mass the same as the atom? |
|  | protons and neutrons |  | Yes |
| Isotope |  |  |  |

Table 2: Subatomic Particles and Ions/Atoms

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Number of protons | Number of Neutrons | Number of electrons | Mass Number | Charge | Chemical Symbol |
| Hydrogen ion | 1 |  |  | 1 | 1+ | H+ |
| Hydrogen atom |  |  |  |  |  |  |
| Carbon atom |  |  | 6 | 12 |  |  |
| Sodium Ion |  |  | 10 |  |  |  |
| Fluorine atom |  |  |  |  |  |  |
| Fluorine ion |  |  |  |  |  |  |

14. Metals form \_\_\_\_\_\_\_\_\_\_\_\_ and nonmetals form cations .

15. Which nonmetal breaks this trend? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Periodic Table Trends**

16. What is coulombic attraction? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. What is the atomic radius?

18. What is the trend in atomic radius as you go down a group? As you go across a period?

group: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19.What is the trend in ionization energy as you go down a group? As you go across a period?

group: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ period : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. Why do metals have low ionization energy?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21. What is the trend in electronegativity going down a group? As you go across a period?

group: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_