

Science 10 – FINAL EXAM REVIEW

Unit 1 – Chemistry

1. Know how to read the Periodic Table of Elements

Where are the metals located on the periodic table? _____

Where are the non-metals located on the periodic table? _____

Rows are called: _____

Columns are called: _____

6
C
Carbon
12.011

2. On the following diagram:

What does the 6 represent: _____

What does 12.011 represent: _____

3. Complete this chart for the following elements

Element	Atomic Number	Neutrons	Protons	Electrons	Valance Electrons
Al					
B					
Ne					
S					

4. Define:

a. Ions:

b. Cations:

c. Anions:

d. Polyatomic ion:

5. Determine the ionic charge that the following elements would have

Lithium _____

Beryllium _____

Sodium _____

Carbon _____

Nitrogen _____

Iodine _____

Fluorine _____

6. How can you tell when you have an ionic compound?

7. How can you tell when you have a molecular compound?

8. How can you tell if you have an organic compound?

9. How can you tell if you have an acid?

10. How can you tell if you have a base?

11. Name the following ionic compounds:

a) K_2S _____

b) Ag_2O _____

c) CH_4 _____

d) $AlBr_3$ _____

e) $HNO_{2(aq)}$ _____

f) C_6H_{12} _____

g) $HBr_{(aq)}$ _____

h) $FeCl_3$ _____

i) $CaCl_2$ _____

j) CO_2 _____

k) $H_2CO_{3(aq)}$ _____

l) NO_3 _____

m) $AuCl$ _____

n) Na_3N _____

o) $LiOH_{(aq)}$ _____

p) Na_2CO_3 _____

12. Write the formulas for the following compounds:

- | | | | |
|----------------------|-------|---------------------------|-------|
| a) Sodium oxide | _____ | i) Nitrous Acid | _____ |
| b) Hydrofluoric acid | _____ | j) Hydroarsenic acid | _____ |
| c) Pentene | _____ | k) Ethene | _____ |
| d) Copper (I) iodide | _____ | l) Magnesium hydroxide | _____ |
| e) Calcium Nitride | _____ | m) Dinitrogen tetraoxide | _____ |
| f) Lithium Fluoride | _____ | n) Phosphorus trichloride | _____ |
| g) Sodium Phosphate | _____ | o) Sulphide dioxide | _____ |
| h) Butane | _____ | p) Carbon tetrafluoride | _____ |

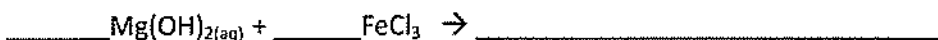
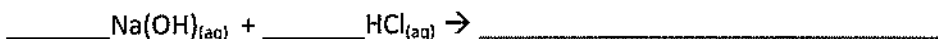
13. Balance the following chemical equations:

- a) _____ Br_2 + _____ H_2 \rightarrow _____ HBr
- b) _____ N_2 + _____ H_2 \rightarrow _____ NH_3
- c) _____ Fe_2O_3 + _____ H_2 \rightarrow _____ Fe + _____ H_2O
- d) _____ $\text{C}_{10}\text{H}_{16}$ + _____ Cl_2 \rightarrow _____ C + _____ HCl

14. Know the 6 types of reactions. Give an equation to represent each type:

- | | |
|------------------|------------------------|
| a) Synthesis | d) Neutralization |
| b) Decomposition | e) Double Displacement |
| c) Combustion | f) Single Displacement |

15. Predict the products of the following reactions & Balance:



16. Name and explain the 4 ways you can make a chemical reaction go faster, using the collision theory.

17. What are the properties of Acids? _____

18. What are the properties of Bases? _____