Unit 2 Review: Matter and Chemical Change

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Boiling point, solubility, density, melting temperature, state, and crystal structure are \_\_\_\_\_\_\_\_\_\_\_ properties.
2. Reacting with acids, reacting with water, stability, reactivity, combustibility and rusting are examples of \_\_\_\_\_\_\_\_\_\_\_ properties.
3. Name three heterogeneous mixtures, and three homogenous mixtures.
4. Show the difference between the WHMIS symbols for poisonous and infectious immediate effects versus other toxic effects. Also draw the flammability symbol.
5. Draw a diagram of an element and a compound to show the differences between them.
6. Name two elements that would be liquid at room temperature.
7. Draw an atomic diagram for lithium and fluorine.
8. Draw out the classification of matter chart.
9. Give the correct IUPAC name for CF4; explain why you gave it that name?
10. Give the number of atoms in H2SO4
11. Give the correct IUPAC name for CaCl2; explain why you gave it that name?
12. Name four properties of ionic compounds.
13. Explain the purpose of the staircase on the periodic table.
14. Use the periodic table to show the number of protons, neutrons and electrons for calcium and helium.
15. Name four factors that can affect the rate of reaction. Give two ways to slow down the reaction, and two ways to speed up the reaction.
16. A reaction that absorbs or takes in energy is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_ reaction. A reaction that gives off or releases energy is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_ reaction
17. Name three examples of a physical change, and three examples of a chemical change. Justify your choices.
18. List the reactants and products in a combustion reaction.
19. What are some common properties of a metal?
20. Define the law of conservation of mass, and explain how it differs from the law of definite composition.
21. What is the difference between a qualitative physical property and a quantitative physical property?
22. What are some common characteristics of the alkali metal family?
23. What type of compounds is each of the following? Justify your answer.
    1. H2O
    2. KCl
    3. CuSO4
24. Which family does each of the following elements belong to?
    1. Cl
    2. H
    3. Li
    4. Ca
25. List the characteristics of the particle model of matter.
26. How can you identify whether or not a chemical reaction has occurred?
27. Provide the chemical formula’s for the following:
    1. Dihydrogen dioxide
    2. Carbon tetrachloride
    3. Potassium chloride
28. What is the name given to chemical family 18 on the periodic table? What characteristic gives them this name, and why do they have this characteristic?
29. What is the charge of a proton, neutron, and electron, and draw a diagram that shows where you would find each within an atom.