**Chemistry 1 Final Exam Review**

1. What are the differences between matter, mass and volume?

2. How are physical and chemical properties different? Give examples of each.

3. Describe similarities and differences between the three states of matter.

4. How are homogeneous and heterogeneous mixtures different? Give examples of each.

5. What are the two categories of matter? How are they different?

6. Explain the difference between a physical and a chemical change. List some examples.

7. What are the two categories of substances? How are they different?

8. What happens to the amount of matter during a physical or a chemical change?

9. What is the difference between an intensive and an extensive property? List examples.

10. What is an atom? What is it made of? Describe the subatomic particles present.

11. What is the difference between mass number and atomic number?

12. How many protons, neutrons and electrons does the isotope potassium-42 have?

13. How are elements different from each other?

14. How are isotopes different from each other? How are they the same?

15. How many protons, neutrons, and electrons does this isotope have? E

What is element “E”?

16. What are valence electrons? How many can an atom have? Why are they important?

17. Draw the electron configurations and dot structures for the elements Boron, Vanadium, Rubidium and Selenium.

18. List the different sublevels and the number of orbitals and electrons they have. Where are they on the periodic table?

19. What is the difference between the excited state and the ground state of an electron?

20. How do electrons get “excited”?

21. What are periods? What do elements in the same period have in common?

22. What are groups/families? What do elements in the same period have in common?

23. What is a chemical bond? Why do atoms bond together?

24. How is an ionic bond formed?

25. How are ions formed? Why are they formed?

26. What is the octet rule?

27. How does a covalent bond form? What types of elements are involved?

28. Name: Ca(ClO3)2 N3Br5 Cu3P S2O

29. Write the formulas for: Tetracarbon Octahydride, Titanium (III) Sulfide,

Strontium Hydroxide, Iodine Difluoride