Science 10 Review Chemistry (Chapters 4) Test 1

1. Briefly describe the families, Alkali metals and Alkali Earth metals.

2. Briefly describe the families, Halogens, and Noble gases.

3. Draw and label an atom. Be sure to include all 3 types of subatomic particles

4. Which of the following particles are found in the nucleus of an atom?

5. Draw a Bohr diagram for a K atom and a K ion.

6. How many valence electrons does oxygen have? Does aluminum have?

7. How many electrons does a neutral atom of Mg have? How many valence electrons does it have?

8. What happens when an atom forms an ion?

9. How many electrons can be found in the each shell, for the first 3 shells, in a Bohr model?

10. What are paired electrons?

11. What do the dots in the Lewis diagram represent?

12. How many bonding pairs and lone pairs of electrons are present in the molecule nitrogen monoxide?

13. Draw the Lewis diagrams represents a molecule of NH_3

14. Draw the Lewis diagram of CCl_4

15. What types of elements are involved in covalent bonding?

16. What happens to electrons when a covalent bond is formed?

17. What happens to electrons when a covalent bond forms?

18. What is a HOF BrINCl?

19. Draw the Bohr diagram for HBr

20. Draw the Bohr diagram for C_2H_6?

21. Explain the steps to name an ionic compound.

22. Explain the steps to name a covalent compound.

23. How is an ionic compound formed?

24. List the 10 prefixes used in covalent compounds.

25. When do you use a Roman numeral in naming compounds?

26. How do you tell the difference between an ionic compound and a covalent compound?

27. What is a polyatomic ion? What happens when a formula needs more than one of a polyatomic ion?

28. What is a subscript?

29. Do you always use all prefixes in naming a covalent compound? What is the exception?

30. Do you leave the ionic charges in the formula for an ionic compound?

31. What does a subscript mean outside of brackets?

32. 33. 34. Are more naming and formula writing questions.

35. What is the difference between bonding pairs and lone pairs of electrons?

36. What is the Law of Conservation of Mass?

37. Balance: _____ NH_3 + _____ O_2 → _____ HNO_3 + _____ H_2O

38. Balance: _____ $KClO_3$ → _____ KCl + _____ O_2

39. Balance: _____ CaO + _____ P_2O_5 → _____ $Ca_3(PO_4)_2$

40. Balance: _____ Na + _____H_2O → _____ NaOH + _____ H_2

41. What does the Law of Conservation of Mass have to do with balancing equations?

42. Balance: _____ $Al_2(SO_4)_3$ + _____ $Ca(OH)_2$ → _____ $Al(OH)_3$ + _____ $CaSO_4$

43. Is NH_4Cl ionic or covalent? How do you know?