

Chapter 08

Study Guide

A. Ionic Bonds

1. An ionic bond is defined as _____
2. Name three important properties of ionic compounds

3. Anions tend to form from _____ when they _____.
4. Cations tend to form from _____ when they _____.
5. An ion with a 1+ charge has had _____ electrons stolen.
6. An ion with a 3- charge has stolen _____ electrons.
7. Elements from group VIA tend to form ions with a _____ charge.
8. The names of monatomic anions end with _____.
9. In an ionic compound the _____ must be equal.
10. What does "(IV)" mean when written in a compound's name? _____
11. What does the octet rule say? _____
12. How many electrons does hydrogen have when it has a complete octet? _____

B. Lewis Structures

13. In a Lewis structure, there may be no more than _____ dots around an atomic symbol.
14. In the Lewis structure for N, there are _____ paired electrons and _____ bonding sites.

Draw Lewis dot diagrams for each of the following:

15. F 16. O 17. Si 18. C

C. Writing Formulas

Write names for the following

19. $\text{Mn}(\text{OH})_5$ _____
20. FeCO_3 _____
21. Na_2SO_4 _____
22. Li_3P _____

D. Naming Substances

Next to each chemical name write the correct empirical formula for each of the following.

- | | |
|---------------------------------------|-----------------------------------|
| 23. Titanium (IV) iodide _____ | 27. Manganese (VII) oxalate _____ |
| 24. Nickel (II) fluoride _____ | 28. Sodium hydroxide _____ |
| 25. Iron (III) bromide _____ | 29. Silver nitrate _____ |
| 26. Sodium dihydrogen phosphate _____ | 30. Lithium hydroxide _____ |

E. Metallic Bonds

31. Define a metallic bond _____