

Name: _____

Period: _____

Seat#: _____

Answer the following questions:

1) What is the difference between an anion and a cation	2) What is the difference between an ionic bond and a covalent bond?
3) What is a valence electron? Why do you think valence electrons are the ones involved in bonding and not core electrons?	4) Explain why ionic compounds are electrically neutral
5) Elements within a group have the same number of what?	6) Are the majority of elements in the periodic table metals or nonmetals?
	7) If you have a compound with a high electronegativity difference (one atom high, one atom low) – what type of bond is it?

How many electrons must be gained or lost by each atom to achieve a stable e- configuration:

8) Sr	9) Sb	10) Si	11) S	12) Se	13) Xe

Which of the following pairs of elements will form ionic bonds, and which will not? Explain why they do, or why they will not.

14) Sulfur and Xenon	15) Sodium and Calcium	16) Strontium and Sulfur	17) Selenium and Chlorine

How many valence electrons are there in each of the following elements AND COMPOUNDS (add up the valence electrons for each atom). Show your addition for the compounds:

18) Ca	19) P	20) Se
21) NH ₃	22) NF ₃	23) Al ₂ (CO ₃) ₃

Identify if each is an ionic compound, or a covalent molecule

24) LiF	25) MgO	26) CH ₄	27) CH ₃ OH	28) NH ₃	29) H ₂ O

Dougherty Valley HS Chemistry
Bonding and Structure – Bonding and Naming Basics

Explain how to name each type of item:

30) Ionic Compounds	31) Covalent Molecules
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32) Identify the prefixes for the following numbers:

1	2	3	4	5
6	7	8	9	10

Name each item:

<i>Formula</i>	<i>Metals, Nonmetals, Polyatomic Ions?</i>	<i>Ionic or Covalent?</i>	<i>Name</i>
33) CH ₄			
34) C ₂ H ₆			
35) Ag ₂ O			
36) SO ₃			
37) MgBr			
38) Cu			
39) V			
40) Ca(SO ₄)	<i>Polyatomic</i>	<i>Ionic</i>	
41) (NH ₄) ₂ (CO ₃)			