

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) Silver 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 <sub>3</sub>	22) NF <sub>3</sub>	23) Al <sub>2</sub> (CO <sub>3</sub> ) <sub>3</sub>

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

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

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

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**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:**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>

**Name each item:**

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