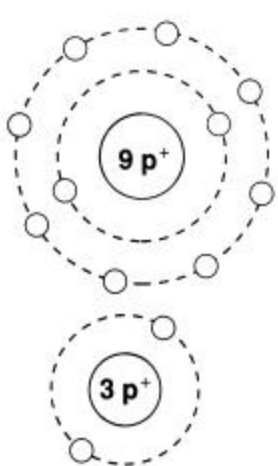
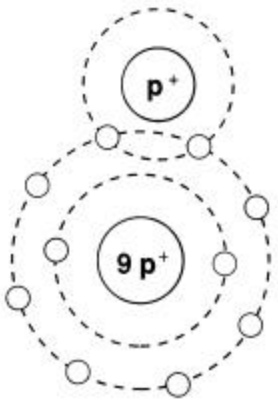


## CHEMICAL BONDS

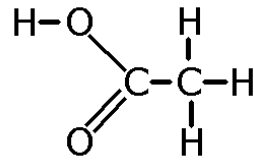
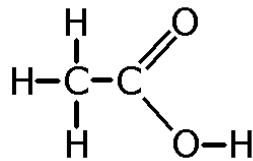
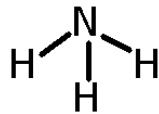
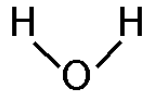
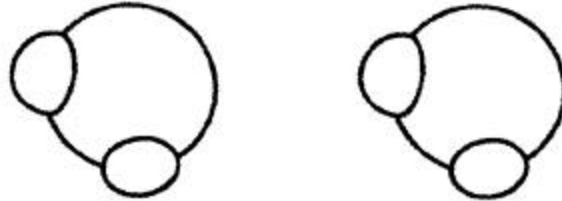
### DEFINITION/DESCRIPTION:

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### TYPES:

	
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TYPES:



**QUESTIONS:**

1. Define the following terms:

Valence Electron	
Valence Shell	

2. How is the chemical behavior of an atom determined by its electron configuration?

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3. Why do atoms form chemical bonds?

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4. Identify the type of bond described in each of the following. Use the key below to indicate your answers.

A. Covalent, polar  
B. Covalent, nonpolar

C. Hydrogen  
D. Ionic

\_\_\_\_\_ Strongest bonds

\_\_\_\_\_ Weakest type of bond

\_\_\_\_\_ Bonds formed by the complete transfer of electrons from atom to another

\_\_\_\_\_ Bonds formed by the equal sharing of electrons between two atoms

\_\_\_\_\_ Bonds formed by the unequal sharing of electrons between two atoms

\_\_\_\_\_ Attraction between oppositely charged portions of two different polar molecules

\_\_\_\_\_ C—C

\_\_\_\_\_ Na—Cl

\_\_\_\_\_ H—C

\_\_\_\_\_ P—O

\_\_\_\_\_ C—O

\_\_\_\_\_ N—H

5. How can you determine if the bond between two atoms is polar covalent, nonpolar covalent, or ionic?

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6. How is the shape of a molecule important in biological systems?

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7. Match the description with the correct term.

- \_\_\_\_\_ Charged atom or molecule                      A. Anion
- \_\_\_\_\_ Negatively charged ion                              B. Cation
- \_\_\_\_\_ Positively charged ion                              C. Ion

8. How many electrons are shared between the atoms in each of the following:

Chemical Bond	# of e- shared	Chemical Bond	# of e- shared
<b>C-C</b>		<b>N≡N</b>	
<b>O=O</b>		<b>H-C</b>	

9. What is the biological importance of weak bonds?

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10. What is the meaning of the following statement: "Nonpolar covalent bonds and ionic bonds are two extremes of a continuum."

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