

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Honors Chemistry Practice Test - Unit3

- \_\_\_\_\_ 1. True or false? The greater the difference in electronegativity between two bonded atoms, the more polar the bond.  
A) True B) False
- \_\_\_\_\_ 2. Which of the following bonds would be the most polar without being considered ionic?  
A) Mg-O B) C-O C) O-O D) Si-O E) N-O
- \_\_\_\_\_ 3. Which of the following has nonpolar bonds?  
A) H<sub>2</sub>S D) OF<sub>2</sub>  
B) HCl E) All are nonpolar.  
C) Br<sub>2</sub>
4. Write the correct formula for calcium hydrogen carbonate.
5. Write the correct formula for ammonium dichromate.
6. Write the correct formula for dinitrogen pentoxide.
7. Write the correct formula for sodium hydride.
8. Write the correct formula for iron(III) sulfide.
9. Give the formula for iron(III) oxide.
10. Give the formula for barium phosphate.
11. Give the formula for dinitrogen pentoxide.
12. Give the formula for cobalt(II) nitrate.
13. Give the formula for lithium sulfide.
14. Give the formula for sulfur dioxide.
15. Give the name for SnS<sub>2</sub>.
16. Give the formula for dinitrogen monoxide.
17. Give the formula for carbon monoxide.
18. Draw the Lewis electron structure for the Cl<sub>2</sub> molecule.
19. Draw the Lewis electron structure for the HI molecule.

20. Draw the Lewis electron structure for the  $\text{AsH}_3$  molecule.
21. Draw the Lewis electron structure for the  $\text{H}_2\text{Te}$  molecule.
22. Draw the Lewis structure for  $\text{NI}_3$ .

Use the following to answer questions 23-26.

Use the following choices to describe the molecular structure of each of the following molecules or ions.

- a. linear
- b. trigonal planar
- c. tetrahedral
- d. pyramidal
- e. V-shaped

23.  $\text{CH}_4$

24.  $\text{SO}_2$

25.  $\text{PF}_3$

26.  $\text{OCl}_2$

\_\_\_\_ 27. True or false? The bonding forces that hold the atoms of a molecule together are called intermolecular forces, whereas the forces that occur among molecules that cause them to aggregate to form a solid or a liquid are called intramolecular forces.

A) True

B) False

\_\_\_\_ 28. The bonds between hydrogen and oxygen in a water molecule can be characterized as \_\_\_\_\_.

A) hydrogen bonds

D) intramolecular forces

B) London forces

E) dispersion forces

C) intermolecular forces

\_\_\_\_ 29. When a water molecule forms a hydrogen bond with another water molecule, which atoms are involved in the interaction?

A) a hydrogen from one molecule and a hydrogen from the other molecule

B) a hydrogen from one molecule and an oxygen from the other molecule

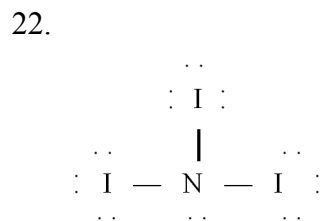
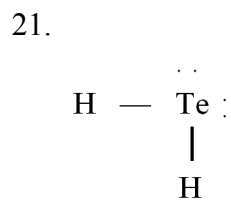
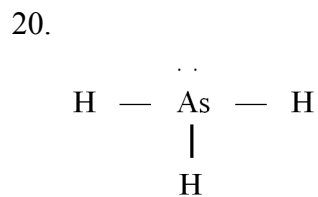
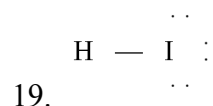
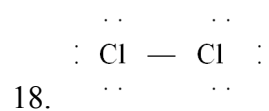
C) an oxygen from one molecule and an oxygen from the other molecule

D) two hydrogens from one molecule and one oxygen from the other molecule

E) two hydrogens from one molecule and one hydrogen from the other molecule

## Answer Key - H\_Practice Test 3a

1. True
2. D
3. C
4.  $\text{Ca}(\text{HCO}_3)_2$
5.  $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$
6.  $\text{N}_2\text{O}_5$
7. NaH
8.  $\text{Fe}_2\text{S}_3$
9.  $\text{Fe}_2\text{O}_3$
10.  $\text{Ba}_3(\text{PO}_4)_2$
11.  $\text{N}_2\text{O}_5$
12.  $\text{Co}(\text{NO}_3)_2$
13.  $\text{Li}_2\text{S}$
14.  $\text{SO}_2$
15. tin(IV) sulfide
16.  $\text{N}_2\text{O}$
17. CO



23. c
24. e
25. d

- 26. e
- 27. False
- 28. D
- 29. B