Chemistry I-Standard

Molecular Polarity & Intermolecular Forces Practice

1. Briefly describe the difference between molecular and bond polarity. How are they alike? How are they different? Be sure to address all prompts.

2. For the following set of molecules determine if they are polar (P) or nonpolar (NP) based on a correctly drawn Lewis structure:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| a. \_\_\_\_ |  | b. \_\_\_\_ |  | c. \_\_\_\_ |  |
| d. \_\_\_\_ | PH3 | e. \_\_\_\_ | SiO2 | f. \_\_\_\_ | CF4 |

3. Determine the intermolecular forces for these substances using the following key:

**A) London (dispersion); B)dipole-dipole; C) H-interactions (bonding); D) macromolecule**

a. \_\_\_\_\_\_\_ PCl3 f. \_\_\_\_\_\_\_ DNA

b. \_\_\_\_\_\_\_ HI g. \_\_\_\_\_\_\_ ammonia (NH3) gas

c. \_\_\_\_\_\_\_ SO3

d. \_\_\_\_\_\_\_ liquid bromine

e. \_\_\_\_\_\_\_ oxygen dibromide gas

f. \_\_\_\_\_\_\_ helicase (a protein)