SCH Structure, Forces and Properties Quiz CLASS SET
COMPLETE CIRCLED QUESTIONS ONLY ON YOUR OWN PAPER

Short Answer only this quiz!

1. For a science fair project, a student wants to design a simple device for removing certain gases from polluted air. He knows that polar molecules dissolve well in water, so he bubbles polluted air through a jug of water to remove unwanted gases. For his project, the student uses air containing the following gases:
   $N_{2(g)}$, $HF_{(g)}$, $CCl_{4(g)}$, $NH_{3(g)}$

   a. Draw and name the structures of these compounds using VSEPR theory.
   b. Identify molecules as polar or non-polar. Include dipoles and vectors.
   c. Predict which of the gases will be removed from the gas sample in this experiment. Explain your prediction.

2. Write a sentence to describe the theoretical structure of solid ionic compounds.

3. When using VSEPR to explain the shape of molecules, explain why lone pairs of electrons must be considered and how they affect the location of bonding pairs of electrons.

4. A thin stream of water will bend when a charged object is brought near it. Explain this observation using a complete structural diagram of a water molecule.
5. Explain one reason why a double bond is treated the same as a single covalent bond when determining the shape of a molecule.

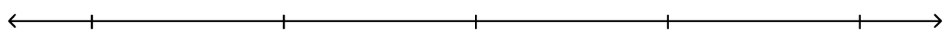
6. a. Explain why CH_3F is a polar molecule while CF_4 is not.
   b. CH_3F has a melting point of -78ºC and CF_4 has a melting point of -130ºC. Explain this difference referring to ALL forces involved.

7. What accounts for the fact that ice is less dense than water?

8. Compare AND contrast (similarities and differences) the melting point and solubility in water of LiF with KBr.

9. Explain when dipole-dipole forces will form.

MUST DO THIS: **DRAW THIS LINE on your answer page and indicate how confident you feel in this topic and the accuracy of your quiz answers.**
****After reviewing the answers & making your corrections, make a second mark on the line in your correction colour.**



Not Yet Getting there Got it!!