Chapter 8 - Covalent Bonding/Polarity Quiz

Multiple Choice
*Identify the choice that best completes the statement or answers the question.*

___ 1. Which of the following bond is not an intermolecular force
   a. London Dispersion forces
   b. Dipole Dipole Forces
   c. Hydrogen Bonding
   d. Covalent Bonding

___ 2. Which of the forces of molecular attraction is the weakest?
   a. dipole interaction
   b. dispersion
   c. hydrogen bond
   d. single covalent bond

___ 3. What causes dipole interactions?
   a. sharing of electron pairs
   b. attraction between polar molecules
   c. bonding of a covalently bonded hydrogen to an unshared electron pair
   d. attraction between ions

___ 4. Which of the following physical property can you observe to determine the type of IMF acting on a molecule?
   a. Boiling Point
   b. Surface Tension
   c. Polarity
   d. All of the above

___ 5. What causes hydrogen bonding?
   a. attraction between ions
   b. motion of electrons
   c. sharing of electron pairs
   d. bonding of a covalently bonded hydrogen atom with an unshared electron pair

Matching

Draw lewis dots and use VSEPR theory to determine whether the following compounds are Polar or NonPolar. (Hint - the compounds, not just the bonds)

a. Polar 
   b. Non-Polar

___ 6. CCl₄
___ 7. NH₃
___ 8. SO₂
___ 9. H₂S
___ 10. CO₂
Identify the type of Intermolecular Force that would be present. Only answer dispersion if it is the only intermolecular force in the molecule.

a. London Dispersion Forces
b. Dipole - Dipole
c. Hydrogen Bonding

11. HCl
12. CO₂
13. XeF₄
14. NH₃
15. ICl
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Answer Section

MULTIPLE CHOICE

1. ANS: D  PTS: 1  DIF: L3  REF: p. 248 | p. 249
   OBJ: 8.4.1 Describe how electronegativity values determine the charge distribution in a polar molecule.
   MSC: application
2. ANS: B  PTS: 1  DIF: L1  REF: p. 251
   OBJ: 8.4.2 Evaluate the strengths of intermolecular attractions compared with the strengths of ionic and covalent bonds.
   MSC: knowledge
3. ANS: B  PTS: 1  DIF: L1  REF: p. 251
   OBJ: 8.4.2 Evaluate the strengths of intermolecular attractions compared with the strengths of ionic and covalent bonds.
   MSC: knowledge
4. ANS: D  PTS: 1  DIF: L3  REF: p. 248 | p. 249
   OBJ: 8.4.1 Describe how electronegativity values determine the charge distribution in a polar molecule.
   MSC: application
5. ANS: D  PTS: 1  DIF: L2  REF: p. 251
   OBJ: 8.4.2 Evaluate the strengths of intermolecular attractions compared with the strengths of ionic and covalent bonds.
   MSC: comprehension

MATCHING

6. ANS: B  PTS: 1
7. ANS: A  PTS: 1
8. ANS: A  PTS: 1
9. ANS: A  PTS: 1
10. ANS: B  PTS: 1
11. ANS: B  PTS: 1
12. ANS: A  PTS: 1
13. ANS: A  PTS: 1
14. ANS: C  PTS: 1
15. ANS: B  PTS: 1