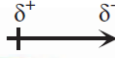


Name: _____ Date: _____ Period: _____

AP Chemistry Chapter 13 Essentials Pt I

KINETIC-MOLECULAR DESCRIPTION OF LIQUIDS AND SOLIDS

1. Why are liquids and solids considered “condensed phases” of matter?
2. When two liquids form a homogeneous solution they are said to be _____.
3. Using the table on page 448 in your textbook, answer the following questions:
 - a) How are liquids and solids similar yet different?
 - b) How are liquids and gases similar yet different?
 - c) Do solids and gases share any similar properties?
4. Define solidification and crystallization.
5. What is the difference between intermolecular and intramolecular attractions?
6. As the charges on ions increase in an ionic compound, what affect does that have on the melting point and boiling point temperatures of a given substance?
7. Compare the melting point temperature of MgO with KCl and explain the reason for the difference.
8. What are Dipole–dipole interactions and how do they relate to hydrogen bonding? Give one example of each from your textbook.

9. Explain how the symbol  is used in dipole-dipole interactions.
10. What elements must be present in order for hydrogen bonding to occur?
11. What kind of molecules experience Dispersion/London forces and what are temporary dipoles?
12. What happens to the strength of dispersion forces as the size of the molecule increases?
13. What is a temporary dipole? Give an example.
14. Identify the types of intermolecular forces that are present in a condensed phase (liquid or solid) sample of each of the following. For each, make a sketch, including a few molecules, that represents the major type of force. (a) water, H₂O (b) iodine, I₂ (c) nitrogen dioxide, NO₂.
15. What does the viscosity of a liquid represent with regards to intermolecular forces?
16. What is surface tension and capillary action?
17. What is the difference between a cohesive force and an adhesive force?