

CHEM 101 Study Questions for Chapter 6

1. Use pictures and words to explain the difference between liquid water and steam (water vapor).
2. Indicate whether heat must be added or removed for each process to occur:
melting vaporization condensation freezing
3. Indicate whether each statement about secondary forces is true or false.
All secondary forces result from an attraction between opposite charges.
Secondary forces explain the shape of a molecule.
London forces are the weakest type of secondary forces.
All polar molecules can form hydrogen bonds.
Dipole-dipole interactions may occur when H is bonded to N, O, or F.
London forces exist between all molecules.
4. Describe the attractive forces between molecules for each compound: I₂, HI, NH₃
5. Predict the order of boiling point for I₂, HI, NH₃, from lowest temperature to highest. Explain your reasoning.
6. Predict the order of solubility for I₂, HI, NH₃ in water, from most soluble to least soluble. Explain your reasoning
7. A chemist would use the symbolism below for a saturated solution of NaCl. Use your own words to describe this equilibrium system.

