

Assessment

States of Matter**Section Quiz: Changes of State**

In the space provided, write the letter of the term or phrase that best completes each statement or answers each question.

- _____ 1. Equilibrium is characterized by
- opposing processes occurring at equal rates.
 - an open system.
 - net change in the amount of substance in one phase.
 - changes in physical states.
- _____ 2. The process of changing from a solid to a gas is known as
- condensation.
 - sublimation.
 - deposition.
 - vaporization.
- _____ 3. Which of the following liquids is most volatile?
- water
 - ether
 - molten salt
 - skim milk
- _____ 4. A phase is defined as any part of a system that has
- the same composition throughout.
 - the same properties throughout.
 - the same properties and composition throughout.
 - the same temperature throughout.
- _____ 5. Dry ice sublimates into carbon dioxide gas. If the proper conditions are maintained and the system is closed, the dry ice and the carbon dioxide gas will eventually
- become the same phase.
 - reach equilibrium.
 - stop changing phase.
 - Both (a) and (b)

Section Quiz, *continued*

- _____ 6. If the vapor pressure of water is 4.25 kPa at 30.0°C, the vapor pressure of water at 10.0°C is most likely to be
- 0 kPa.
 - 1.23 kPa.
 - 4.25 kPa.
 - 12.34 kPa.
- _____ 7. The temperature at which the vapor pressure of a substance equals atmospheric pressure is its
- boiling point.
 - critical point.
 - melting point.
 - triple point.
- _____ 8. The amount of energy needed to melt one mole of a substance is its molar
- enthalpy of fusion.
 - enthalpy of vaporization.
 - entropy of fusion.
 - entropy of vaporization.
- _____ 9. The point on a phase diagram that indicates the temperature and pressure conditions at which the solid, liquid, and vapor of the substance can coexist at equilibrium is known as the
- critical point.
 - phase point.
 - triple point.
 - equilibrium point.
- _____ 10. Assume you have a substance that plots right on the liquid-vapor equilibrium line on its phase diagram. If you raise the temperature slightly and keep the same pressure, the substance will now be
- a solid.
 - a liquid.
 - a gas.
 - on a different equilibrium line.