Chapter 10: Thermal Energy Test

Multiple Choice

Identify the choice that best completes the statement or answers the question.

_____ 1. Temperature is a measure of the _____ of atoms and molecules.
a. heat
b. potential energy
c. average kinetic energy
d. thermal energy

_____ 2. The temperature scale for use in Europe is _____, when located _____.
a. Celsius
b. Kelvin
c. Kelvin
d. Celsius

_____ 3. Heat is the _____.
a. amount of thermal energy in an object
b. difference between the kinetic and potential energy
c. energy of hot objects
d. thermal energy transferred from hot to cold objects

_____ 4. A gas in a closed container has its volume of _____.
a. constant
b. increasing
c. increasing
d. decreasing

_____ 5. When you add a higher speed to the molecules, what would _____ have first?
a. kinetic energy
b. potential energy
c. temperature
d. thermal energy

Completion

Complete each statement.

6. The normal possible temperature is _____ (0°C, 100°C, –273°C).

7. Mercury thermometers work because mercury _____ (expands, contracts, condenses) when it is warmed.

8. Convection is heat transfer in a liquid or gas when the warm _____ (hot, cold, light, dense) fluid rises and the cooler _____ (hot, cold, light, dense) fluid sinks.

9. When you put your hand first on a cold metal object, a wooden floor, it feels very hot. Heat has moved from hand to _____ (conduction, radiation, convection).

10. If you add 100 mL of water at 50°C to 200 mL of water at 50°C, the average kinetic energy of the molecules _____ (increases, decreases, remains the same).

11. When 100 mL of water at 50°C is added to 200 mL of water at 50°C, the thermal energy _____ (increases, decreases, remains the same). Use the Celsius scale.

12. Temperature is a measure of the average value of the _____ (kinetic, potential, mechanical) energy of the molecules in a substance.