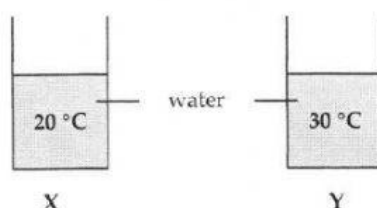


**ACTIVITY # 12.2 KINETIC MOLECULAR THEORY** Date due: \_\_\_\_\_

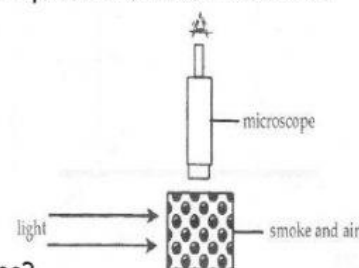
1. The diagram shows two beakers X and Y containing the same amount of water at different temperatures.



How are the molecules in beaker Y different from the molecules in beaker X ?

- A. The molecules in Y have more energy and move slower than those in X.
  - B. The molecules in Y have more energy and move faster than those in X.
  - C. The molecules in Y have the same energy and speed as those in X.
  - D. The molecules in Y have less energy and move faster than those in X
2. An experiment demonstrates Brownian motion. Smoke particles in a glass cell are illuminated and viewed through a microscope. Small bright spots are seen in random motion. What is the cause of this observation?

- A. smoke particles striking each other.
- B. smoke diffusing through air.
- C. refraction of light in the glass cell.
- D. air molecules colliding with the smoke particles.



3. When sweat evaporates, which change of state takes place?

- A. liquid to solid
- B. liquid to vapour
- C. vapour to liquid
- D. solid to vapour

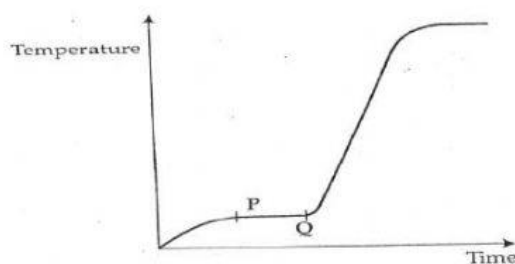
4. Heat will always pass from one object to another one nearby if the objects have different

- A. masses
- B. volumes
- C. surface area
- D. temperatures

5. Which statement best describes the molecules in a gas?

- A. They are closer together and moving slowly.
- B. They are closer together and moving quickly.
- C. They are far apart and moving quickly.
- D. They are far apart and moving slowly.

6. A container full of gas is left to stand on a bench for a long time. Which statement about the molecules is correct?
- A. all molecules are at the bottom of the container
  - B. the fastest moving gas molecules are at the top of the container
  - C. the molecules are moving at random throughout the container
  - D. the pressure caused by the molecules on the container is greatest at the top of the container.
7. A student finds the sample of a water boils at  $105^{\circ}\text{C}$ . What could be the reason for this?
- A. Air pressure is less than average atmospheric pressure.
  - B. Air pressure is greater than average atmospheric pressure.
  - C. The surface of the water container is too large.
  - D. The water is pure.
8. A pure substance is heated at a constant rate in a container, and the temperature is recorded at intervals giving the graph below.



- What happens to the substance at Q?
- A. boiling
  - B. condensing
  - C. freezing
  - D. melting
9. The rate at which a liquid evaporates can be increased by
- A. adding an impurity
  - B. blowing air over the surface
  - C. increasing the pressure above the surface
  - D. lowering the temperature