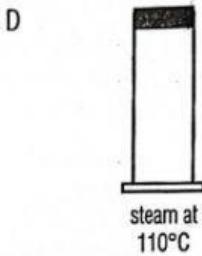
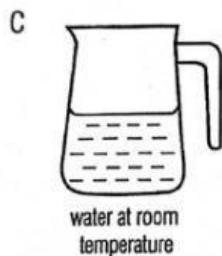
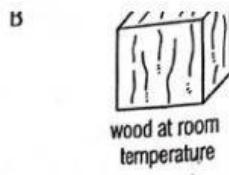
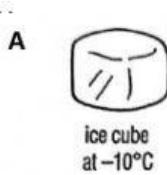


Thermal revision

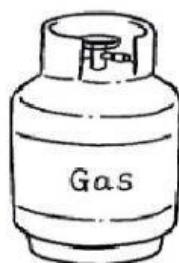
- The temperature of water is raised from 5°C to 90°C. Which of following best describes the changes to the molecules of liquid?
 - They gain kinetic energy and move more quickly.
 - They gain thermal energy and the intermolecular forces become stronger.
 - They move close together and the density increases.
 - They move freely and randomly in all directions resulting in an increase in volume.
- A student conducted an experiment to study Brownian motion of smoke particles in air. What should the student see when he looked into the microscope?
 - air molecules moving in a random manner
 - air molecules colliding with each other
 - smoke particles moving in random manner
 - smoke particles vibrating about their fixed positions
- Which statement is true when water is heated at boiling point?
 - The water molecules do not gain energy
 - The water molecules gain potential energy.
 - The water molecules gain kinetic energy.
 - The water molecules gain kinetic and potential energy.
- Why are smoke particles used to observe Brownian motion?
 - The smoke particles are visible and allow us to understand the motion of air molecules.
 - The smoke particles are visible and air molecules are constantly in random motion
 - The smoke particles are lighter than air particles and hence they can be bombarded by air particles.
 - Smoke particles are in constant random motion while the air particles are vibrating about a fixed position.
- Which of the following contains molecules with the highest average speed?



6. When a metal is being heated to a higher temperature without melting, which of the following will occur?

- 1 The atoms can move freely.
 - 2 The atoms have larger amplitude of vibration.
 - 3 The average kinetic energy of the atoms is increased.
- | | |
|-----------------------|-----------------------|
| A 1 and 2 only | B 1 and 3 only |
| C 2 and 3 only | D 1, 2 and 3 |

7. A fixed mass of gas is kept in a rigid sealed cylinder.



How does a change in temperature affect the pressure of the gas?

	Temperature change	Pressure change
A	decreases	increases
B	decreases	unchanged
C	Increases	decreases
D	Increases	increases

8. The temperature of a gas is halved at constant volume. Which of the following changes is/are correct?

- 1 The number of collisions on the walls per unit time remains the same.
 - 2 The average kinetic energy of the gas molecules becomes lower.
 - 3 The molecules collide with less force on the walls.
- | | |
|-----------------------|-----------------------|
| A 1 only | B 2 only |
| C 1 and 3 only | D 2 and 3 only |

9. Which quantity must be the same for two bodies if they are to be in thermal equilibrium?

- | | |
|--------------------------|---------------------------|
| A internal energy | B potential energy |
| C temperature | D mass |