

Kinetic Model of Matter – 2022 Nov O Level 5054

1. **Nov/2022/Paper_11/No.21**

A kilogram of a substance has a fixed shape.

Thermal energy supplied to the substance weakens the forces of attraction between its molecules.

What is happening?

- A A gas is being heated.
- B A liquid is at its boiling point.
- C A liquid is evaporating.
- D A solid is at its melting point.

2. **Nov/2022/Paper_11/No.22**

Which conditions produce the greatest rate of evaporation from a liquid?

- A high temperature, draught and large surface area of liquid
- B high temperature, no draught and large surface area of liquid
- C low temperature, draught and small surface area of liquid
- D low temperature, no draught and small surface area of liquid

3. **Nov/2022/Paper_12/No.15**

15 A gas syringe contains a volume V_1 of gas at pressure p_1 .

The volume is reduced to V_2 without any change of temperature.

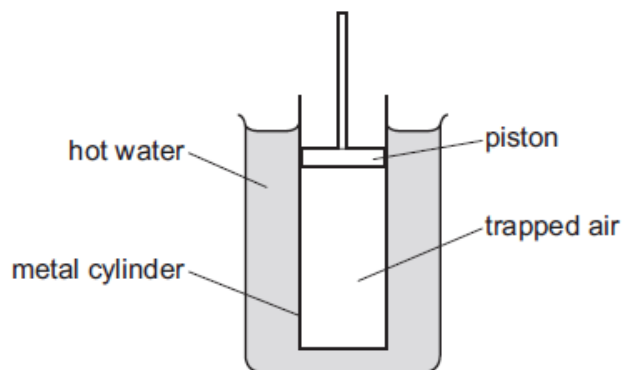
What is the expression for the **change** in pressure?

- A $\frac{p_1 V_1}{V_2} + p_1$ B $p_1 + \frac{p_1 V_2}{V_1}$ C $\frac{p_1 V_1}{V_2} - p_1$ D $\frac{p_1 V_2}{V_1} - p_1$

4. Nov/2022/Paper_12/No.21

Air is trapped in a metal cylinder by a piston. The piston is free to move and the trapped air is at atmospheric pressure.

The cylinder is in hot water.



The cylinder is taken out of the water and left to cool.

What happens to the mass of the air in the cylinder and its pressure as it cools?

	mass of air	pressure of air
A	does not change	does not change
B	does not change	changes
C	changes	does not change
D	changes	changes