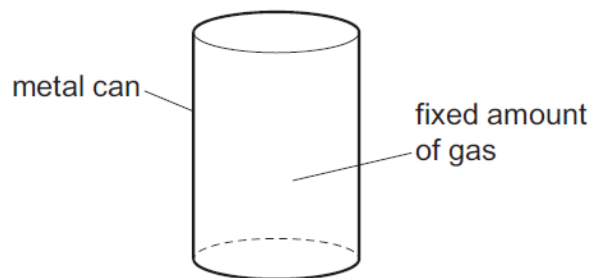


**Kinetic Model of Matter – 2021 O Level 5054****1. Nov/2021/Paper\_11/No.15**

A fixed amount of gas is trapped inside a metal can.



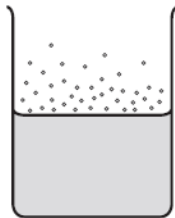
The temperature of the gas decreases but the volume does not change.

How does this change affect the kinetic energy of the gas molecules and the pressure inside the metal can?

|          | kinetic energy | pressure  |
|----------|----------------|-----------|
| <b>A</b> | decreases      | decreases |
| <b>B</b> | decreases      | increases |
| <b>C</b> | increases      | decreases |
| <b>D</b> | stays the same | decreases |

**2. Nov/2021/Paper\_11/No.16**

The diagram shows a room temperature liquid in a beaker.



What reduces the rate of loss of liquid by evaporation?

- A** blowing air across the top of the beaker
- B** heating the liquid
- C** putting a lid on the beaker
- D** transferring the liquid to a beaker with a larger diameter

**3. Nov/2021/Paper\_12/No.20**

The temperatures of the water in four beakers are different and areas of the surfaces of the water are also different.

In which beaker is the rate of evaporation of the water greatest?

|          | temperature of water / °C | surface area of water / cm <sup>2</sup> |
|----------|---------------------------|---|
| <b>A</b> | 20                        | 50                                      |
| <b>B</b> | 20                        | 100                                     |
| <b>C</b> | 25                        | 50                                      |
| <b>D</b> | 25                        | 100                                     |

## 4. June/2021/Paper\_12/No.22

Which row describes the shape of a liquid and the arrangement of its molecules?

|          | shape                    | arrangement of molecules |
|----------|--------------------------|--------------------------|
| <b>A</b> | fixed                    | not regular              |
| <b>B</b> | fixed                    | regular                  |
| <b>C</b> | takes shape of container | not regular              |
| <b>D</b> | takes shape of container | regular                  |

**5. June/2021/Paper\_12/No.23**

Air in a sealed container of fixed volume is heated.

The pressure of the air increases.

How do the molecules of air cause this increase in pressure?

- A** The molecules expand and push on the container with a greater force.
- B** The molecules move at the same speed and hit the container with a greater force.
- C** The molecules move faster and hit the container more often.
- D** The molecules move further apart and hit the container more often.