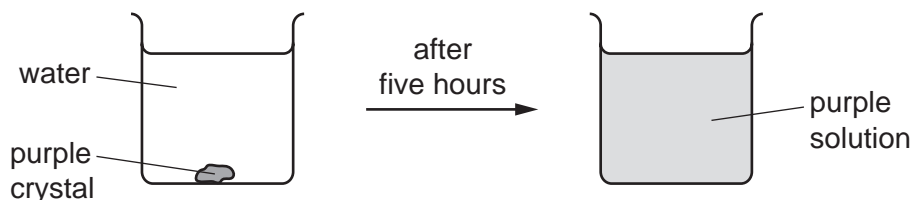


Paper 1

Questions are applicable for both core and extended candidates

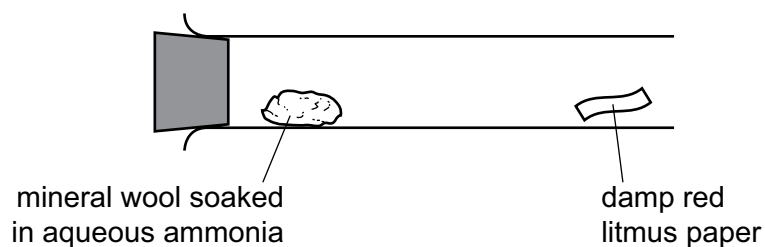
- 1 The diagram shows the result of dropping a purple crystal into water.



Which processes take place in this experiment?

	chemical reaction	diffusing	dissolving
A	✓	✓	✗
B	✓	✗	✗
C	✗	✗	✓
D	✗	✓	✓

- 2 Mineral wool soaked in aqueous ammonia is placed in the apparatus shown.



After five minutes, the damp red litmus paper turns blue.

Which process led to this change?

- A** condensation
- B** crystallisation
- C** diffusion
- D** distillation

Paper 2

**Questions are applicable for both core and extended candidates
unless indicated in the question**

3 Which statements about diffusion are correct?

- 1 Aqueous ions cannot diffuse in water.
- 2 Diffusion is caused by the random movement of particles.
- 3 Particles spread out in all directions in diffusion.
- 4 Diffusion can only take place in solids and liquids.

A 1 and 2 **B** 1 and 4 **C** 2 and 3 **D** 3 and 4

4 Which gas has the fastest rate of diffusion? **(extended only)**

A Ar **B** C₂H₆ **C** HCl **D** H₂S

5 Which gas has the fastest rate of diffusion? **(extended only)**

A H₂ **B** CH₄ **C** CO₂ **D** SO₂

6 Which two gases will diffuse at the same rate, at the same temperature? **(extended only)**

- A** carbon monoxide and carbon dioxide
B carbon monoxide and nitrogen
C chlorine and fluorine
D nitrogen and oxygen

7 Four experiments, each containing a different acidic gas, are set up as shown.

The dividing glass plates are removed at the same time.

In which set of apparatus does the litmus turn red first? **(extended only)**

