



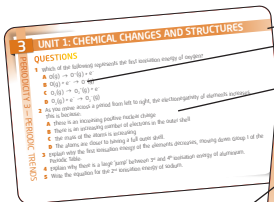
BrightRED Revision Cards

# HIGHER CHEMISTRY

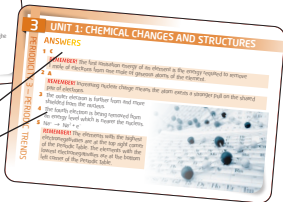


# BRIGHT RED REVISION CARDS

These revision cards are packed full of great Higher Chemistry questions, diagrams, illustrations, answers and tips to help you to actively test your knowledge and ramp up your revision. Each card covers a course topic which offers a mixture of multiple-choice and exam-style questions. Answers and explanations with key pointers are on the reverse.



- All key course topics covered in order
- Multiple-choice questions to get things going
- Exam-style questions to follow up



- Answers with short explanations
- **REMEMBER!** tips to shine a light on any harder concepts or questions

## HOW TO USE

You can test yourself alone or with friends and should do so at spaced intervals when you feel confident about the topics you have studied. You can use the cards in any order to vary your approach and can shuffle the pack to mix things up a little bit!

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### Acknowledgements

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# UNIT 1: CHEMICAL CHANGES AND STRUCTURES

## QUESTIONS

- 1 The reason that the boiling point of sulfur is more than  $150^{\circ}\text{C}$  higher than the melting point of phosphorus is because:
  - A There are more London dispersion forces between sulfur molecules than between phosphorus molecules
  - B There are more covalent bonds in sulfur molecules than in phosphorus molecules
  - C The covalent bonds are stronger in sulfur molecules than in phosphorus molecules
  - D Sulfur has a higher electronegativity than phosphorus.
- 2 Explain why the boiling points of the noble gases increase as you move down the group in the Periodic Table.
- 3 At  $20^{\circ}\text{C}$  a solid element exists as a lattice of positively charged ions through which delocalised electrons are continually moving. State which type of bonding exists in this element.
- 4 Which type of intermolecular force is formed as a result of electrostatic attraction between temporary and induced dipoles caused by movement of electrons in atoms or molecules?

# UNIT 1: CHEMICAL CHANGES AND STRUCTURES

## ANSWERS

### 1 A

Sulfur and phosphorus molecules are held together by covalent bonds but there are London dispersion forces between the molecules. Sulfur is a larger molecule than phosphorus so there are more London dispersion forces between sulfur molecules than phosphorus.

2 As you move down the Group in the Periodic Table, the atoms are larger and the London dispersion forces get stronger so more energy is needed to overcome these forces.

3 Metallic bonds

**REMEMBER!** Metallic bonding is the electrostatic force of attraction between the positively charged ions and negatively charged delocalised outer electrons.

4 London dispersion forces

**REMEMBER!** London dispersion forces are forces of attraction that exist between all atoms and molecules. They are caused by temporary dipoles and are a relatively weak intermolecular force.

### LONDON DISPERSION FORCE

