

Paper 3**Questions are applicable for both core and extended candidates**

- 1 A list of substances is shown.

brass
 calcium oxide
 carbon monoxide
 diamond
 glucose
 hydrogen
 litmus
 magnesium bromide
 methyl orange
 sodium chloride
 stainless steel
 thymolphthalein
 water
 zinc oxide

Answer the following questions about these substances.
 Each substance may be used once, more than once or not at all.

State which substance:

- (b) is a mixture of copper and zinc

..... [1]

- 2 Magnesium is an element in Group II of the Periodic Table.

- (c) Alloys of magnesium and aluminium are resistant to corrosion.

Choose the diagram, **A**, **B**, **C** or **D**, in Fig. 7.1 that best shows the structure of an alloy.

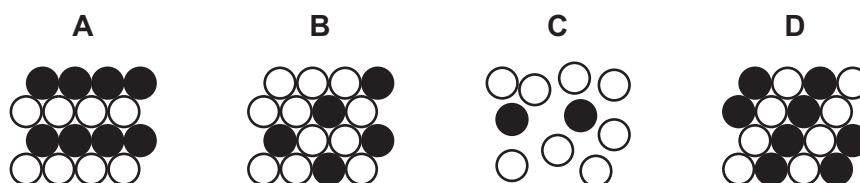


Fig. 7.1

diagram [1]

3 This question is about metals.

(c) Steel is an alloy of iron.

(i) State the meaning of the term alloy.

.....
 [1]

(ii) State why alloys are more useful than pure metals.

..... [1]

4 This question is about metals and metal compounds.

(c) Stainless steel is an alloy of iron.

(i) Give **one** reason why alloys are more useful than pure metals.

..... [1]

(ii) Brass is an alloy.

Choose the diagram, **A**, **B**, **C** or **D**, in Fig. 5.1 that best shows the structure of brass.

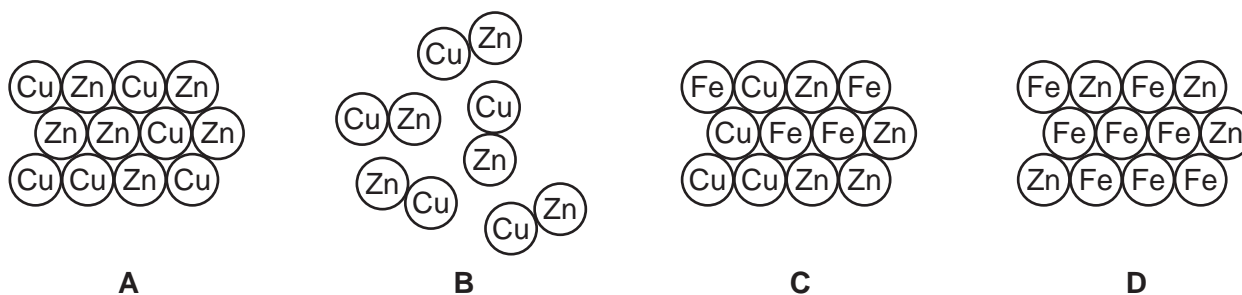


Fig. 5.1

diagram [1]

5 This question is about metals.

(b) Metals are often used in the form of alloys.

(i) State the meaning of the term *alloy*.

.....
..... [1]

(ii) Explain in terms of their properties why alloys are used instead of pure metals.

..... [1]

(iii) Stainless steel is an alloy.

Give **one** use of stainless steel.

..... [1]

Paper 4

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

6 Copper is element 29 in the Periodic Table.

(a) Brass contains copper.

(i) Name the other metal in brass.

..... [1]

(ii) State the term given to a mixture of a metal with another element.

..... [1]

7 A list of substances is shown.

aluminium oxide

carbon dioxide

chlorine

diamond

ethanol

glucose

iron(III) oxide

limestone

nitrogen

oxygen

Answer the questions using the list of substances.

Each substance may be used once, more than once or not at all.

State which of the substances:

(e) is a gas used to convert iron into steel

..... [1]