



Oxford Cambridge and RSA

## **GCSE Chemistry B (Twenty First Century Science)**

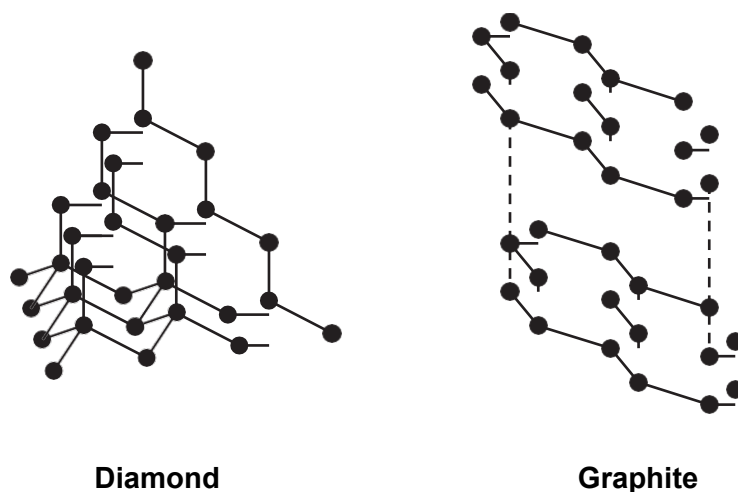
**J258/03** Breadth in chemistry (Higher Tier)

**Question Set 32**

1

Diamond and graphite are allotropes of carbon.

Models of diamond and graphite are shown in **Fig. 8.1**:



**Fig. 1.1**

- (a) Graphite can mark paper but diamond **cannot**.

Explain why.

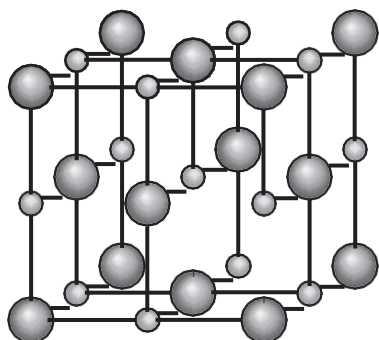
Use ideas about intermolecular forces and bonding in your answer.

**[3]**

- (b) **Fig. 8.2** shows a model of sodium chloride:

What type of structure does sodium chloride have?

You should include the type of bonding in your answer.



**Fig.1.2**

**[1]**

(c) Complete the table to explain how graphite and sodium chloride conduct electricity.

	Graphite	Sodium chloride
Conducts electricity when:	solid	either molten or .....
Particles responsible for conduction of electricity:	.....	.....

[3]

**Total Marks for Question Set 32: 7**

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