

GCSE Chemistry B (Twenty First Century Science)
J258/02 Depth in chemistry (Foundation Tier)

Question Set 1

1

Table 1.1 shows some information about diamond, graphite and carbon dioxide.

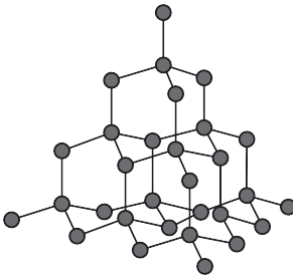
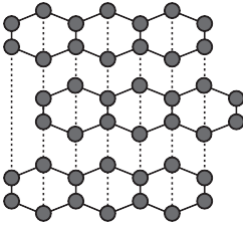

	Diamond	Graphite	Carbon dioxide
Diagram of structure			
Formula	C(s)	C(s)	CO ₂ (g)
Element or compound?	element	element	compound
State at room temperature and pressure	solid
Structure and bonding	giant covalent	giant covalent	simple covalent

Table 1.1

- (a) Complete Table 1.1 by filling in the **state** for graphite and carbon dioxide. [2]
- (b) Explain why diamond and graphite are elements, but carbon dioxide is a compound. [2]
- (c) Diamond and graphite have giant covalent structures. Carbon dioxide has a simple covalent structure.

Explain how the diagrams of their structures show that these statements are true.

[2]

Total Marks for Question Set 1: 6

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