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.

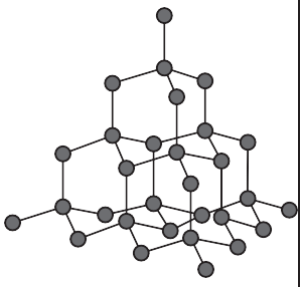
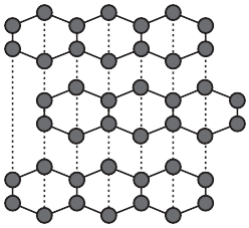
	Diamond	Graphite	Carbon dioxide
Diagram of structure			
Formula	C(s)	C(s)	$CO_2(g)$
Element or compound?	element	element	compound
State at room temperature and pressure	solid	.....	.....
Structure and bonding	giant covalent	giant covalent	simple covalent

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