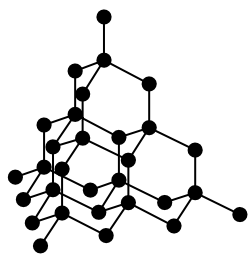


**GCSE Chemistry A (Gateway Science)**

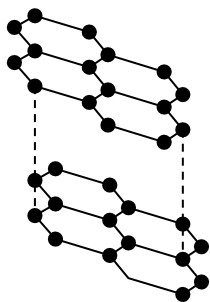
**J248/01** Chemistry A C1-C3 and C7 (Foundation Tier)

**Question Set 19**

1 The diagrams show the structures of diamond and graphite.



Diamond



Graphite

One property of diamond is that it is very hard. One property of graphite is that it is slippery.

(a) Write about the other properties of diamond and graphite.

Diamond ..... high melting point, insoluble in water .....

Graphite ..... conducts electricity, high melting point .....

[4]

(b) Describe the type of bonding between the carbon atoms in diamond.

covalent bonding

[1]

(c) Graphite is slippery.

Use the structure of graphite to explain why.

Between the layers (containing covalently bonded carbons in hexagonal arrangement) there are weak Van der Waals forces holding the layers together. Hence, the layers can slide over each other.

[2]

**Total Marks for Question Set 19: 7**



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