

Solutions

Each answer shows the steps, then the **result**.

2.1

(a)

- giant molecular (giant covalent)

(b)

- giant metallic

2.2

- only weak intermolecular forces are broken on melting

3.1 C

- Giant metallic conducts when solid (delocalised electrons)

3.2 B

- Graphite has delocalised electrons between its layers

3.3

(a)

- giant molecular (giant covalent) structure with covalent bonding

(b)

- e.g. diamond / silicon(IV) oxide

3.4

- when molten or dissolved the ions are free to move and carry charge; in the solid the ions are fixed in the lattice, so they cannot move