**7.6 Using the Models of Bonding**

Covalent molecular, network and layer lattices models of bonding can be used to explain the similarities and differences in properties of non-metal elements and compounds.

* Substances which have a covalent network lattice structure have high melting points.
* Covalent layer lattice substances, such as graphite, have high melting points, conduct electricity and are hard in one dimension but the layers readily peel away in the other dimension.
* Substances composed of covalent molecules have strong covalent bonds within the molecule and weak intermolecular forces between molecules.
* Covalent molecular substances generally have low melting and boiling temperatures. They do not conduct electricity and many are gases and liquids at room temperature.

**Text Questions: 16 – 17**

**Chapter Review: 18 - 35**