

Quiz (Giant Covalent Structure)

Answer the following questions concerning quartz.

- (a) What type of structure does quartz have?
- (b) What is the type of bonding between the silicon and oxygen atoms in quartz?
- (c) Is quartz a high-melting or low-melting solid? Explain briefly.
- (d) Is quartz soluble in (i) water (ii) heptane (a non-aqueous solvent)?
- (e) Does quartz conduct electricity? Explain briefly.

Suggested Answer

- (a) Giant covalent structure
- (b) Covalent bonding
- (c) Quartz is a high-melting solid. This is because a lot of heat energy is needed to break a large number of covalent bonds in the structure.
- (d) Quartz is neither soluble in water nor heptane.
- (e) No. This is because there are no mobile ions or delocalized electrons in the structure.