

## Chapter 7: Structure and Properties

All the following "answers" are for your reference only!  
The "best" answers are based on your actual experimental results!

Experiment 7.1: To compare the properties of sodium chloride, iodine, wax and quartz

### 6. Table 7.1

Substance	Physical state	Does it melt easily?	Is it volatile?	Is it soluble in water?	Does its aqueous solution conduct electricity?
Sodium chloride	Solid	No	No	Yes	Yes
Iodine	Solid	It sublimates at room temperature	Yes	Slightly soluble	No
Wax	Solid	Yes	No	No	---
Quartz	Solid	No	No	No	---

7. (a) (i) Sodium chloride  
(ii) Iodine, wax  
(iii) Quartz

(b)

Substance	Type of structure
Sodium chloride	Giant ionic structure
Iodine	Simple molecular structure
Wax	Simple molecular structure
Quartz	Giant covalent structure

8. (a) They are high-melting solids, non-volatile and soluble in water. They conduct electricity when dissolved in water and when molten.
- (b) They have low melting points and are insoluble in water. They do not conduct electricity whether in solid or liquid states.
- (c) They are high-melting solids, insoluble in water.