

Chapter: 19 (Ionic compounds)**T.B Question 1. Copy and Complete.**

Ionic compounds are made from metals and non-metals. Metals always form **positive** charged ions, and non-metals form **negative** charged ions. These ions are arranged in **giant** ionic structures. Their crystals have **high** melting points and many will **dissolve** in water. They conduct **electricity** when molten or when in solution, but not when they are **solid**.

Question / Answer:**Q.1. Write the properties of ionic compounds.**

Ans. I) Ionic compounds are made of crystals.

ii) They have high melting point.

iii) They are often soluble in water.

iv) They conduct electricity when molten or dissolved in water.

Q.2. Carbon which has 6 electrons never forms ions, why?

Ans. Carbon has 4 electrons in their outermost shell. They need 4 more electrons to become stable. So, it is difficult to gain or lose electrons due to equal attraction on protons and electrons. Hence, they don't form ions.

Q.3. Hydrogen, which has 1 electron can form both H^+ ion and H^- ion. Explain why?

Ans. Because hydrogen has only 1 electron in the outermost shell. It is easy for hydrogen to lose or gain the electron and form H^+ or H^- ions.

Q.4. What are giant ionic structure? Give example.

Ans. In certain structures ions are arranged in a huge arrangements. Such huge structures are called giant ionic structures. Eg. Structure of sodium chloride is a giant ionic lattice.

Q.5. Here are 3 metal ions:

Lithium, Li^+ , Calcium, Ca^{2+} , Iron(iii), Fe^{3+}

Here are 3 non-metal ions:

Fluoride, F^- , Iodide, I^- , Sulfide, S^{2-}

Draw a table to show the formulas of the compounds between these metals and non-metals.

Ans.

	Fluoride, F^-	Iodide, I^-	Sulfide, S^{2-}
Lithium, Li^+	LiF	LiI	Li_2S
Calcium, Ca^{2+}	CaF_2	CaI_2	CaS
Iron(iii), Fe^{3+}	FeF_3	FeI_3	Fe_2S_3

Q.6. Draw atomic structure.

Na, Mg, Al, C, N, O, Cl, Ar (practice at home)

Q.7. Draw a diagram to show the formation of compounds by transfer of electrons from atoms.

NaCl, KCl, LiF, Na₂O, MgO, MgCl₂, MgF₂ (practice at home)

.....O.....