

**Quiz 5.7 (i): Physical Properties of Ionic and Covalent Bond**

- (a) Electrical Conductivity
- (b) Solubility In water and organic solvent

1. Table shows the physical properties of compounds X, and Y.

Compound	Electrical conductivity		Solubility in water	Solubility in organic solvent
	Solid	Molten		
X	No	No	No	Yes
Y	No	Yes	Yes	No

(a) State the type of chemical bond in Compound X and Compound Y.

- (i) Compound X : .....
- (ii) Compound Y : .....

(b) State the type of particles in compound X and Y

- (i) Compound X : .....
- (ii) Compound Y : .....

(c) Explain why compound X cannot conduct electricity in the both solid and molten state.

.....  
(d) Explain why compound Y cannot conduct electricity in solid state.

.....  
(e) Explain why compound Y able to conduct electricity in molten state.

.....  
(f) State the type of particles in compound X and Y.

.....  
(g) State why compound Y is soluble in water.

.....  
(h) State why compound Y is insoluble in organic solvent.

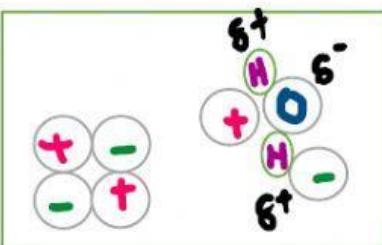
.....  
(i) State why compound X soluble in organic solvent.

2. Which of the following is the physical properties of lead(II) bromide,  $PbBr_2$ ?

- A. Soluble in water
- B. Conduct electricity in all state
- C. Soluble in organic solvent
- D. Insoluble in water

3. **Solubility in water.**

Example : Sodium chloride, NaCl



Why sodium chloride is soluble in water ?

Attraction force between atom of water molecules with the ions of ionic compounds are strong enough to overcome the ..... between ion themselves.

4. Tick the correct answer.

**1<sup>st</sup> properties : Electrical conductivity**

Physical state	Ionic Compounds	Covalent Compounds
Solid		
Molten		
Aqueous		

**2<sup>nd</sup> properties : Solubility in water and organic solvent**

Solubility in	Ionic Compounds	Covalent Compounds
Water		
Organic solvent		

Thanks for Cooperation ☺