

Molecular Solutions : Notes/W.S.-30

Some solutions are molecular solutions . These are solutions with a molecular compound dissolved in them.

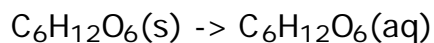
A molecular compound is composed of molecules made up of non-metallic atoms. These atoms are held together by covalent bonds.

A covalent bond between two non-metallic atoms consists of a pair of shared electrons.

Molecular compounds do not dissociate in water, and therefore do not conduct electricity.

An example of a molecular compound is: $C_6H_{12}O_6$ (glucose, a sugar).

Glucose is very soluble in water. When we add glucose to water we can write;



Problems:

- 1) What is a molecular solution?
- 2) What is a molecular compound?
- 3) What is a covalent bond?
- 4) The following compounds can be dissolved in water. State whether they are molecular or ionic compounds.
 - a) sucrose ($C_{12}H_{22}O_{11}$)
 - b) LiF
 - c) O_2
 - d) HCN
 - e) ethanol (C_2H_5OH)
 - f) H_2CO_3

Answers: 1) It is a solution which contains a molecular compound., 2) It is a compound which consists only of non-metals., 3) It is a bond which consists of a pair of electrons that are shared between two non-metallic atoms., 4)a) M, b) I, c) M, d) I, e) M, f) I.