

CHEMICAL BONDING

WORKSHEET - 1

1. What kind of elements form positively charged ions?
2. What kind of elements form negatively charged ions?
3. Why is sodium ion not reactive, but Na metal is very reactive?
4. "Atoms and ions differ in their physical as well as chemical properties." Give an example to support this statement.
5. (a) Name the covalent compound, which dissolves in water and conducts electricity.
(b) Which one property of the above compound, which agrees with it being a covalent compound?
6. State the types of bonds present in,
 - a. sodium chloride
 - b. methane
 - c. carbon tetrachloride.
 - d. calcium oxide
 - e. Ammonium ion
 - f. Ammonium chloride.
7. What type of bonding is expected in a metallic chloride?
8. Acids dissolve in water to produce positively charged ions. Draw the structure of the positive ion.
9. What is a lone pair of electrons? Name a neutral covalent molecule which contains a lone pair of electrons.
10. Why is it that metals form positive ions and non-metals form negative ions?
11. Among the following: NaCl, CCl₄, HCl and CH₄ which is a polar molecule?
12. Which among the following: H₂O, NH₃, BF₃ and NH₄⁺ possess a co-ordinate bond?
13. Which one of the following is non-polar: CH₄, H₂O, NH₃, HCl
14. Name a covalent compound which behaves like an ionic compound in aqueous solution.