

# CHEMICAL BONDING

1. Coordinate covalent compounds are formed by  
[CPMT 1990, 94]  
(a) Transfer of electrons (b) Sharing of electrons  
(c) Donation of electrons (d) None of these process
2. In the coordinate valency [CPMT 1989]  
(a) Electrons are equally shared by the atoms  
(b) Electrons of one atom are shared with two atoms  
(c) Hydrogen bond is formed  
(d) None of the above
3. Which of the following contains a coordinate covalent bond  
[MNR 1990; IIT 1986]  
(a)  $N_2O_5$  (b)  $BaCl_2$   
(c)  $HCl$  (d)  $H_2O$
4. A coordinate bond is formed when an atom in a molecule has  
[CBSE PMT 1992]  
(a) Electric charge on it  
(b) All its valency electrons shared  
(c) A single unshared electron  
(d) One or more unshared electron pair
5. Which has a coordinate bond [RPMT 1997]  
(a)  $SO_3^{2-}$  (b)  $CH_4$   
(c)  $CO_2$  (d)  $NH_3$
6. The compound containing co-ordinate bond is  
Example 21.1 [AFMC 1999; Pb. CET 2002]  
(a)  $O_3$  (b)  $SO_3$   
(c)  $H_2SO_4$  (d) All of these
7. Which forms a crystal of  $NaCl$   
[CPMT 1972; NCERT 1976; DPMT 1996]  
(a)  $NaCl$  molecules (b)  $Na^+$  and  $Cl^-$  ions  
(c)  $Na$  and  $Cl$  atoms (d) None of the above
8. When sodium and chlorine reacts then [NCERT 1973]  
(a) Energy is released and ionic bond is formed  
(b) Energy is released and a covalent bond is formed  
(c) Energy is absorbed and ionic bond is formed  
(d) Energy is absorbed and covalent bond is formed
9. Which one is least ionic in the following compounds  
[CPMT 1976; BHU 1998]  
(a)  $AgCl$  (b)  $KCl$   
(c)  $BaCl_2$  (d)  $CaCl_2$
10. The electronic configuration of four elements  $L$ ,  $P$ ,  $Q$  and  $R$  are given in brackets  
 $L(1s^2, 2s^2 2p^4)$ ,  $Q(1s^2, 2s^2 2p^6, 3s^2 3p^5)$   
 $P(1s^2, 2s^2 2p^6, 3s^1)$ ,  $R(1s^2, 2s^2 2p^6, 3s^2)$   
The formulae of ionic compounds that can be formed between these elements are [NCERT 1983]  
(a)  $L_2P$ ,  $RL$ ,  $PQ$  and  $R_2Q$  (b)  $LP$ ,  $RL$ ,  $PQ$  and  $RQ$

- (c)  $P_2L$ ,  $RL$ ,  $PQ$  and  $RQ_2$  (d)  $LP$ ,  $R_2L$ ,  $P_2Q$  and  $RQ$
11. Electrovalent compound's [MP PMT 1984]  
(a) Melting points are low  
(b) Boiling points are low  
(c) Conduct current in fused state  
(d) Insoluble in polar solvent
12. A electrovalent compound is made up of  
[CPMT 1978, 81; MNR 1979]  
(a) Electrically charged molecules  
(b) Neutral molecules  
(c) Neutral atoms  
(d) Electrically charged atoms or group of atoms
13. Electrovalent bond formation depends on  
(a) Ionization energy (b) Electron affinity  
(c) Lattice energy (d) All the three above
14. In the following which substance will have highest boiling point  
[NCERT 1973; MP PMT 1990]  
(a)  $He$  (b)  $CsF$   
(c)  $NH_3$  (d)  $CHCl_3$
15. An atom of sodium loses one electron and chlorine atom accepts one electron. This result the formation of sodium chloride molecule. This type of molecule will be  
[MP PMT 1987]  
(a) Coordinate (b) Covalent  
(c) Electrovalent (d) Matallic bond
16. Formula of a metallic oxide is  $MO$ . The formula of its phosphate will be  
[CPMT 1986, 93]  
(a)  $M_2(PO_4)_2$  (b)  $M(PO_4)$   
(c)  $M_2PO_4$  (d)  $M_3(PO_4)_2$
17. From the following which group of elements easily forms cation  
(a)  $F$ ,  $Cl$ ,  $Br$  (b)  $Li$ ,  $Na$ ,  $K$   
(c)  $O$ ,  $S$ ,  $Se$  (d)  $N$ ,  $P$ ,  $As$
18. Which type of compounds show high melting and boiling points  
[CPMT 1996]  
(a) Electrovalent compounds  
(b) Covalent compounds  
(c) Coordinate compounds  
(d) All the three types of compounds have equal melting and boiling points
19. Lattice energy of an ionic compound depends upon  
[AIEEE 2005]  
(a) Charge on the ion only  
(b) Size of the ion only  
(c) Packing of ions only  
(d) Charge on the ion and size of the ion
20. The values of electronegativity of atoms  $A$  and  $B$  are 1.20 and 4.0 respectively. The percentage of ionic character of  $A - B$  bond is  
[MP PET 2003]  
(a) 50 % (b) 43 %  
(c) 55.3 % (d) 72.24%

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House Number – 1322  
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