

CHEMISTRY

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M.Sc., B.Ed.

11 - 12 SCI

IIT - JEE

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Eng - Med / Guj - Med

Chemical bonding

Part - 1

- 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
- 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
- Which one is least ionic in the following compounds
[CPMT 1976; BHU 1998]
(a) AgCl (b) KCl
(c) BaCl_2 (d) CaCl_2
- 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
- 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
- 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
- Electrovalent bond formation depends on
(a) Ionization energy (b) Electron affinity
(c) Lattice energy (d) All the three above
- 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
- An atom of sodium loses one electron and chlorine atom accepts one electron. This results the formation of sodium chloride molecule. This type of molecule will be [MP PMT 1987]
(a) Coordinate (b) Covalent
(c) Electrovalent (d) Metallic bond
- Formula of a metallic oxide is MO . The formula of its phosphate will be [CPMT 1986, 93]
(a) $\text{M}_2(\text{PO}_4)_2$ (b) $\text{M}(\text{PO}_4)$
(c) M_2PO_4 (d) $\text{M}_3(\text{PO}_4)_2$
- 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
- 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
- Lattice energy of an ionic compound depends upon [AIIEE 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
- In the given bonds which one is most ionic [EAMCET 1980]
(a) $\text{Cs}-\text{Cl}$ (b) $\text{Al}-\text{Cl}$
(c) $\text{C}-\text{Cl}$ (d) $\text{H}-\text{Cl}$
- Element x is strongly electropositive and y is strongly electronegative. Both elements are univalent, the compounds formed from their combination will be [IIT 1980]
(a) x^+y^- (b) x^-y^+
(c) $x-y$ (d) $x \rightarrow y$
- In the formation of NaCl from Na and Cl [CPMT 1985]
(a) Sodium and chlorine both give electrons
(b) Sodium and chlorine both accept electrons
(c) Sodium loses electron and chlorine accepts electron
(d) Sodium accepts electron and chlorine loses electron
- Which of the following is an electrovalent linkage [CPMT 1974; DPMT 1984, 91; AFMC 1988]
(a) CH_4 (b) MgCl_2

- (c) SiCl_4 (d) BF_3
18. Electrovalent compounds do not have [CPMT 1991]
 (a) High M.P. and Low B.P. (b) High dielectric constant
 (c) High M.P. and High B.P. (d) High polarity
19. Many ionic crystals dissolve in water because [NCERT 1982]
 (a) Water is an amphiprotic solvent
 (b) Water is a high boiling liquid
 (c) The process is accompanied by a positive heat of solution
 (d) Water decreases the interionic attraction in the crystal lattice due to solvation
20. The electronic structure of four elements A, B, C, D are
 (A) $1s^2$ (B) $1s^2, 2s^2 2p^2$
 (C) $1s^2, 2s^2 2p^5$ (D) $1s^2, 2s^2 2p^6$
 The tendency to form electrovalent bond is largest in [MNR 1987, 95]
 (a) A (b) B
 (c) C (d) D
21. Chloride of metal is MCl_2 . The formula of its phosphate will be [CPMT 1979]
 (a) M_2PO_4 (b) $\text{M}_3(\text{PO}_4)_2$
 (c) $\text{M}_2(\text{PO}_4)_3$ (d) MPO_4
22. The phosphate of a metal has the formula MPO_4 . The formula of its nitrate will be [CPMT 1971; MP PMT 1996]
27. When NaCl is dissolved in water the sodium ion becomes [NCERT 1974; CPMT 1989; MP PMT 1999]
 (a) Oxidized (b) Reduced
 (c) Hydrolysed (d) Hydrated
28. Solid NaCl is a bad conductor of electricity since [AFMC 1980]
 (a) In solid NaCl there are no ions
 (b) Solid NaCl is covalent
 (c) In solid NaCl there is no motion of ions
 (d) In solid NaCl there are no electrons
29. Favourable conditions for electrovalency are
 (a) Low charge on ions, large cation, small anion
 (b) High charge on ions, small cation, large anion
 (c) High charge on ions, large cation, small anion
 (d) Low charge on ions, small cation, large anion
30. The sulphate of a metal has the formula $\text{M}_2(\text{SO}_4)_3$. The formula for its phosphate will be [DPMT 1982; CPMT 1972; MP PMT 1995]
 (a) $\text{M}(\text{HPO}_4)_2$ (b) $\text{M}_3(\text{PO}_4)_2$
 (c) $\text{M}_2(\text{PO}_4)_3$ (d) MPO_4
31. Ionic bonds are usually formed by combination of elements with [CBSE PMT 1993; MP PMT 1994]
 (a) High ionisation potential and low electron affinity
 (b) Low ionisation potential and high electron affinity
 (c) High ionisation potential and high electron affinity
 (d) Low ionisation potential and low electron affinity
32. Molten sodium chloride conducts electricity due to the presence of [IIT 1981]
 (a) Free electrons
 (b) Free ions
 (c) Free molecules
- (a) MNO_3 (b) $\text{M}_2(\text{NO}_3)_2$
 (c) $\text{M}(\text{NO}_3)_2$ (d) $\text{M}(\text{NO}_3)_3$
23. In the transition of Zn atoms to Zn^{++} ions there is a decrease in the [CPMT 1972]
 (a) Number of valency electrons
 (b) Atomic weight
 (c) Atomic number
 (d) Equivalent weight
24. Phosphate of a metal M has the formula $\text{M}_3(\text{PO}_4)_2$. The formula for its sulphate would be [CPMT 1973; MP PMT 1996]
 (a) MSO_4 (b) $\text{M}(\text{SO}_4)_2$
 (c) $\text{M}_2(\text{SO}_4)_3$ (d) $\text{M}_3(\text{SO}_4)_2$
25. The molecular formula of chloride of a metal M is MCl_3 . The formula of its carbonate would be [CPMT 1987]
 (a) MCO_3 (b) $\text{M}_2(\text{CO}_3)_3$
 (c) M_2CO_3 (d) $\text{M}(\text{CO}_3)_2$
26. Sodium chloride easily dissolves in water. This is because [NCERT 1972; BHU 1973]
 (a) It is a covalent compound
 (b) Salt reacts with water
 (c) It is a white substance
 (d) Its ions are easily solvated
- (d) Atoms of sodium and chlorine
33. The phosphate of a metal has the formula MHPO_4 . The formula of its chloride would be [NCERT 1974; CPMT 1977]
 (a) MCl (b) MCl_2
 (c) MCl_3 (d) M_2Cl_3
34. A number of ionic compounds e.g. AgCl , CaF_2 , BaSO_4 are insoluble in water. This is because [NCERT 1984]
 (a) Ionic compounds do not dissolve in water
 (b) Water has a high dielectric constant
 (c) Water is not a good ionizing solvent
 (d) These molecules have exceptionally high alternative forces in the lattice
35. What is the nature of chemical bonding between Cs and F [MP PMT 1987; CPMT 1976]
 (a) Covalent (b) Ionic
 (c) Coordinate (d) Metallic
36. Which one of the following compound is ionic [MNR 1985]
 (a) KCl (b) CH_4
 (c) Diamond (d) H_2
37. Which of the following compound has electrovalent linkage [CPMT 1983, 84, 93]
 (a) CH_3Cl (b) NaCl
 (c) CH_4 (d) Cl_2
38. An ionic compound is generally a [MADT Bihar 1981]
 (a) Good electrolyte (b) Weak electrolyte
 (c) Non-electrolyte (d) Neutral
39. What metals combine with non-metals, the metal atom tends to [AMU 1982]

- (a) Lose electrons
(b) Gain electrons
(c) Remain electrically neutral
(d) None of these
40. Chemical formula for calcium pyrophosphate is $Ca_2P_2O_7$. The formula for ferric pyrophosphate will be [NCERT 1977]
(a) $Fe_3(P_2O_7)_3$ (b) $Fe_4P_4O_{14}$
(c) $Fe_4(P_2O_7)_3$ (d) Fe_3PO_4
41. Among the bonds formed by a chlorine atom with atoms of hydrogen, chlorine, sodium and carbon, the strongest bond is formed between [EAMCET 1988; MP PMT 1993]
(a) $H-Cl$ (b) $Cl-Cl$
(c) $Na-Cl$ (d) $C-Cl$
42. Which of the following is least soluble [CPMT 1989]
(a) BeF_2 (b) SrF_2
(c) CaF_2 (d) MgF_2
43. Which of the following halides has maximum melting point
(a) $NaCl$ (b) $NaBr$
(c) NaI (d) NaF
44. The high melting point and insolubility in organic solvents of sulphanic acid are due to its structure. [IIT 1994]
(a) Simple ionic (b) Bipolar ionic
(c) Cubic (d) Hexagonal
45. Out of the following, which compound will have electrovalent bonding
(a) Ammonia (b) Water
(c) Calcium chloride (d) Chloromethane
46. The force which holds atoms together in an electrovalent bond is
(a) Vander Waal's force
(b) Dipole attraction force
(c) Electrostatic force of attraction
(d) All the above
47. The main reaction during electrovalent bond formation is
(a) Redox reaction (b) Substitution reaction
(c) Addition reaction (d) Elimination reaction
48. Electrovalent compounds are [CPMT 1996]
(a) Good conductor of electricity
(b) Polar in nature
(c) Low M.P. and low B.P.
(d) Easily available
49. Ionic compounds do not have [RPMT 1997]
(a) Hard and brittle nature
(b) High melting and boiling point
(c) Directional properties
(d) Soluble in polar solvents
50. Highest melting point would be of [RPMT 1999]
(a) He (b) $CsCl$
(c) NH_3 (d) $CHCl_3$
51. What is the effect of more electronegative atom on the strength of ionic bond [AMU 1999]
(a) Decreases (b) Increases
(c) Decreases slowly (d) Remains the same
52. An element X with the electronic configuration $1s^2, 2s^2 2p^6, 3s^2$ would be expected to form the chloride with the formula [JIPMER 2000]
(a) XCl_3 (b) XCl_2
(c) XCl (d) X_2Cl
53. Two element have electronegativity of 1.2 and 3.0. Bond formed between them would be [CPMT 1982; DCE 2000]
(a) Ionic (b) Polar covalent
(c) Co-ordinate (d) Metallic
54. Which of the following is least ionic [MP PET 2002]
(a) C_2H_5Cl (b) KCl
(c) $BaCl_2$ (d) $C_6H_5N^+H_3Cl^-$
55. Which type of bonding exists in Li_2O and CaF_2 respectively [RPET 2000]
(a) Ionic, ionic (b) Ionic, covalent
(c) Covalent, ionic (d) Coordinate, ionic
56. An atom with atomic number 20 is most likely to combine chemically with the atom whose atomic number is [BHU 2000]
(a) 11 (b) 14
(c) 16 (d) 10
57. Bond formed in crystal by anion and cation is [CBSE PMT 2000]
(a) Ionic (b) Metallic
(c) Covalent (d) Dipole
58. Atoms or group of atoms which are electrically charged are known [UPSEAT 2001]
(a) Anions (b) Cations
(c) Ions (d) Atoms
59. Which one is the strongest bond [Pb. PMT 2001]
(a) $Br-F$ (b) $F-F$
(c) $Cl-F$ (d) $Br-Cl$
60. The interionic attraction depends on interaction of [Kerala CET (Med.) 2002]
(a) Solute-Solute (b) Solvent-Solvent
(c) The charges (d) Molecular properties
61. Which of the following compounds is ionic [UPSEAT 2002]
(a) KI (b) CH_4
(c) Diamond (d) H_2
62. Which of the following pairs of species has same electronic configuration [UPSEAT 2002]
(a) Zn^{2+} and Ni^{2+} (b) Co^{+3} and Ni^{4+}
(c) Co^{2+} and Ni^{2+} (d) Ti^{4+} and V^{3+}
63. The energy that opposes dissolution of a solvent is [CPMT 2002]
(a) Hydration energy (b) Lattice energy
(c) Internal energy (d) Bond energy
64. Which of the following has highest melting point [RPET 2003]
(a) $BeCl_2$ (b) $MgCl_2$
(c) $CaCl_2$ (d) $BaCl_2$
65. Which of the following statements is not true for ionic compounds [RPET 2003]
(a) High melting point

- (b) Least lattice energy
 (c) Least solubility in organic compounds
 (d) Soluble in water
66. Electrolytes are compound containing [MADT Bihar 1981]
 (a) Electrovalent bond (b) Covalent bond
 (c) Coordinate bond (d) Hydrogen bond
67. Which of the following hydrides are ionic [Roorkee 1999]
 (a) CaH_2 (b) BaH_2
 (c) SrH_2 (d) BeH_2
68. Which of the following conduct electricity in the fused state [Roorkee 2000]
 (a) $BeCl_2$ (b) $MgCl_2$
 (c) $SrCl_2$ (d) $BaCl_2$

Part - 2

1. The valency of sulphur in sulphuric acid is [NCERT 1974]
 (a) 2 (b) 4
 (c) 6 (d) 8
2. The number of electrons involved in the bond formation of N_2 molecule [IIT 1980; CPMT 1983, 84, 85; CBSE PMT 1992]
 (a) 2 (b) 4
 (c) 6 (d) 10
3. The electronic configuration of four elements are given in brackets
 $L(1s^2, 2s^2 2p^1)$, $M(1s^2, 2s^2 2p^5)$
 $Q(1s^2, 2s^2 2p^6, 3s^1)$, $R(1s^2, 2s^2 2p^2)$
 The element that would most readily form a diatomic molecule is [NCERT 1983]
 (a) Q (b) M
 (c) R (d) L
4. In covalency [CPMT 1974, 76, 78, 81; AFMC 1982]
 (a) Electrons are transferred
 (b) Electrons are equally shared
 (c) The electron of one atom are shared between two atoms
 (d) None of the above
5. Which compound is highest covalent
 (a) $LiCl$ (b) LiF
 (c) $LiBr$ (d) LiI
6. The nature of bonding in graphite is [DPMT 1986; CPMT 1986]
 (a) Covalent (b) Ionic
 (c) Metallic (d) Coordinate
7. Which of the following substances has giant covalent structure [DPMT 1985, 86; NCERT 1975]
 (a) Iodine crystal (b) Solid CO_2
 (c) Silica (d) White phosphorus
8. With which of the given pairs CO_2 resembles [BHU 2005]
 (a) $HgCl_2, C_2H_2$ (b) $HgCl_2, SnCl_4$
 (c) C_2H_2, NO_2 (d) N_2O and NO_2
9. The electron pair which forms a bond between two similar non-metallic atoms will be [IIT 1986]
 (a) Dissimilar shared between the two
 (b) By complete transfer from one atom to other
 (c) In a similar spin condition

- (d) Equally shared in between the two
10. For the formation of covalent bond, the difference in the value of electronegativities should be [EAMCET 1982]
 (a) Equal to or less than 1.7 (b) More than 1.7
 (c) 1.7 or more (d) None of these
11. Which type of bond is formed between similar atoms
 (a) Ionic (b) Covalent
 (c) Coordinate (d) Metallic
12. Covalent compounds are generally in water [CPMT 1987]
 (a) Soluble (b) Insoluble
 (c) Dissociated (d) Hydrolysed
13. Which one is the electron deficient compound [AIIMS 1982]
 (a) ICl (b) NH_3
 (c) BCl_3 (d) PCl_3
14. Which among the following elements has the tendency to form covalent compounds
 (a) Ba (b) Be
 (c) Mg (d) Ca
15. Silicon has 4 electrons in the outermost orbit. In forming the bonds [EAMCET 1981]
 (a) It gains electrons (b) It loses electrons
 (c) It shares electrons (d) None of these
16. Which of the following occurs when two hydrogen atoms bond with each others
 (a) Potential energy is lowered
 (b) Kinetic energy is lowered
 (c) Electronic motion ceases
 (d) Energy is absorbed
17. A bond with maximum covalent character between non-metallic elements is formed [NCERT 1982]
 (a) Between identical atoms
 (b) Between chemically similar atoms
 (c) Between atoms of widely different electronegativities
 (d) Between atoms of the same size
18. Amongst the following covalent bonding is found in [CPMT 1973]
 (a) Sodium chloride (b) Magnesium chloride
 (c) Water (d) Brass
19. Indicate the nature of bonding in diamond [EAMCET 1980; BHU 1996; KCET 2000]
 (a) Covalent (b) Ionic
 (c) Coordinate (d) Hydrogen
20. Octet rule is not valid for the molecule [IIT 1979; MP PMT 1995]
 (a) CO_2 (b) H_2O
 (c) CO (d) O_2
21. Which of the following compounds are covalent [IIT 1980; MLNR 1982]
 (a) H_2 (b) CaO
 (c) KCl (d) Na_2S
22. Indicate the nature of bonding in CCl_4 and CaH_2 [NCERT 1973]
 (a) Covalent in CCl_4 and electrovalent in CaH_2
 (b) Electrovalent in both CCl_4 and CaH_2

- (c) Covalent in both CCl_4 and CaH_2
 (d) Electrovalent in CCl_4 and covalent in CaH_2
- 23.** If the atomic number of element X is 7, the best electron dot symbol for the element is [NCERT 1973; CPMT 2003]
 (a) $X \cdot$ (b) $\cdot X \cdot$
 (c) $\cdot \ddot{X} \cdot$ (d) $:\ddot{X}:$
- 24.** Which is the most covalent [AFMC 1982]
 (a) $C-O$ (b) $C-Br$
 (c) $C-S$ (d) $C-F$
- 25.** The covalent compound HCl has the ionic character as [EAMCET 1980]
 (a) The electronegativity of hydrogen is greater than that of chlorine
 (b) The electronegativity of hydrogen is equal to that of chlorine
 (c) The electronegativity of chlorine is greater than that of hydrogen
 (d) Hydrogen and chlorine are gases
- 26.** The correct sequence of increasing covalent character is represented by [CBSE PMT 2005]
 (a) $LiCl < NaCl < BeCl_2$ (b) $BeCl_2 < NaCl < LiCl$
 (c) $NaCl < LiCl < BeCl_2$ (d) $BeCl_2 < LiCl < NaCl$
- 27.** Bond energy of covalent $O-H$ bond in water is [EAMCET 1982]
 (a) Greater than bond energy of $H-H$ bond
 (b) Equal to bond energy of $H-H$ bond
 (c) Less than bond energy of $H-H$ bond
 (d) None of these
- 28.** Solid CH_4 is [DPMT 1983]
 (a) Molecular solid (b) Ionic solid
 (c) Pseudo solid (d) Does not exist
- 29.** A covalent bond is likely to be formed between two elements which [MP PMT 1987]
 (a) Have similar electronegativities
 (b) Have low ionization energies
 (c) Have low melting points
 (d) Form ions with a small charge
- 30.** The bond between two identical non-metal atoms has a pair of electrons [CPMT 1986]
 (a) Unequally shared between the two
 (b) Transferred fully from one atom to another
 (c) With identical spins
 (d) Equally shared between them
- 31.** The valency of phosphorus in H_3PO_4 is [DPMT 1984]
 (a) 2 (b) 5
 (c) 4 (d) 1
- 32.** Which of the following substances has covalent bonding [AMU 1985]
 (a) Germanium (b) Sodium chloride
 (c) Solid neon (d) Copper
- 33.** The covalency of nitrogen in HNO_3 is [CPMT 1987]
 (a) 0 (b) 3
 (c) 4 (d) 5
- 34.** Hydrogen chloride molecule contains a [CPMT 1984]
 (a) Covalent bond (b) Double bond
 (c) Coordinate bond (d) Electrovalent bond
- 35.** As compared to covalent compounds, electrovalent compounds generally have [CPMT 1990, 94; MP PMT 1997]
 (a) Low melting points and low boiling points
 (b) Low melting points and high boiling points
 (c) High melting points and low boiling points
 (d) High melting points and high boiling points
- 36.** The interatomic distances in H_2 and Cl_2 molecules are 74 and 198 pm respectively. The bond length of HCl is [MP PET 1993]
 (a) 272 pm (b) 136 pm
 (c) 124 pm (d) 248 pm

Solution s part - 1

- 1.** (b) $NaCl$ is ionic crystal so it is formed by Na^+ and Cl^- ions.
- 2.** (a) Bond formation is always exothermic. Compounds of sodium are ionic.
- 3.** (a) According to Fajan's rule ionic character is less.
- 4.** (c) Valencies of L, Q, P and R is $-2, -1, +1$ and $+2$ respectively so they will form P_2L, RL, PQ and RQ_2 .
- 5.** (c) Electrovalent compounds are good conductor of heat and electricity in molten state or in aqueous solution.
- 7.** (d) Electrovalent bond formation depends on ionization energy of cation, electron affinity of anion and on lattice energy.
- 8.** (b) Because CsF is electrovalent compound.
- 9.** (c) $NaCl$ is formed by electrovalent bonding.
- 10.** (d) Valency of metal is $+2$ by formula MO so its phosphate would be $M_3(PO_4)_2$ because valency of $[PO_4]$ is -3 .
- 11.** (b) Li, Na and K are alkali metals with low ionization energy and one electron in their outermost shell so they will form cation easily.
- 12.** (a) Melting point and boiling point of electrovalent compounds are high due to strong electrostatic force of attraction between the ions.
- 13.** (d) The value of lattice energy depends on the charges present on the two ions and distance between them. It shall be high if charges are high and ionic radii are small.
- 14.** (a) Cs is more electropositive.
- 15.** (a) X loses electron, Y gains it.
- 16.** (c) Formation of $NaCl$ occurs by Na_{ion}^+ and Cl_{ion}^- .
- 17.** (b) $MgCl_2$ has electrovalent linkage because magnesium is electropositive metal while chlorine is electronegative.
- 18.** (a) Electrovalent compounds generally have high m.pt and high b.pt due to stronger coulombic forces of attractions.
- 19.** (d) Water is a polar solvent so it decreases the interionic attraction in the crystal lattice due to solvation.

11TH & 12TH SCI. JEE / NEET / GUJCET | **11TH & 12TH SCI. NEET / GUJCET**

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12. (b) Water is a polar solvent while covalent compounds are non-polar so they usually insoluble in water.
13. (c) BCl_3 is electron deficient compound because it has only '6' electrons after forming bond.
14. (b) Due to its small size and 2 electrons in s-orbital Be forms covalent compound.
18. (c) H_2O will formed by covalent bonding.
21. (a) Two identical atoms are joined with covalent bond so H_2 will be covalent.
23. (c) Element 'X' has atomic no. 7 so its electronic configuration will be 2, 5. So its electron dot symbol would be : $\overset{\cdot}{\underset{\cdot}{X}}$.
24. (c) C-S will be most covalent. Covalent character depend on the size of cation and anion.
25. (c) HCl has ionic character yet it has covalent compound because electronegativity of chlorine is greater than that of hydrogen.
26. (c) Order of polarising power $Be^{++} > Li^+ > Na^+$
 Hence order of covalent character $BeCl_2 > LiCl > NaCl$.
31. (b) Valency of phosphorus in H_3PO_4 is supposed 'x' then $3+x-8=0$, $x-5=0$, $x=5$.
33. (d) $(+1)+x+3(-2)=0 \Rightarrow 1+x-6=0 \Rightarrow x=6-1=5$.
34. (a) HCl molecule has covalent bond.
35. (d) Electrovalent compounds have high melting point and high boiling point.

Part 1

1	b	2	a	3	a	4	c	5	c
6	d	7	d	8	b	9	c	10	d
11	b	12	a	13	d	14	a	15	a
16	c	17	b	18	a	19	d	20	c
21	b	22	d	23	a	24	a	25	b
26	d	27	d	28	c	29	a	30	d
31	b	32	b	33	b	34	d	35	b
36	a	37	b	38	a	39	a	40	c
41	c	42	b	43	d	44	b	45	c
46	c	47	a	48	b	49	c	50	b
51	b	52	b	53	a	54	a	55	a
56	c	57	a	58	c	59	a	60	c
61	a	62	b	63	d	64	d	65	b
66	a	67	abc	68	bd				

Part 2

1	c	2	c	3	B	4	b	5	d
6	a	7	c	8	a	9	d	10	a
11	b	12	b	13	c	14	b	15	c
16	a	17	a	18	c	19	a	20	b
21	a	22	a	23	c	24	c	25	c
26	c	27	a	28	a	29	a	30	d
31	b	32	a	33	d	34	a	35	d
36	b	37	d	38	c	39	d	40	c