

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.
6. (d) Electrovalent bond formation depends on ionization energy of cation, electron affinity of anion and on lattice energy.
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9. (c) Valencies of L, Q, P and R is $-2$, $-1$, $+1$ and $+2$ respectively so they will form $P_2L$, $RL$, $PQ$ and $RQ_2$.
10. (d) Electrovalent compound is formed by electrovalent bonding.
11. (d) Valency of metal is $+2$ by formula $MO$ so its phosphate would be $M_2(PO_4)_3$ because valency of $[PO_4]$ is $-3$.
12. (d) Water is a polar solvent so it decreases the interionic attraction in the crystal lattice due to solvation.
13. (c) Element C has electronic structure $1s^2$, $2s^2$,$2p^2$, it requires only one electron to complete its octet and it will form anion so it will form electrovalent bond.
14. (b) Since the chloride of a metal is $MCl_2$ therefore metal 'M' must be divalent i.e. $M^{2+}$.$As$ a result the formula of its phosphate is $M_2(PO_4)_3$.
15. (d) Sodium chloride is electrovalent compound so it dissolves in water which is a polar solvent.
34. (d) 
35. (b) Cs is highly electropositive while F is highly electronegative so they will form ionic bond. 
37. (b) Na is highly electropositive while Cl is highly electronegative so they will form ionic bond. 
38. (a) Ionic compounds are good conductors of heat and electricity so they are good electrolyte. 
39. (a) Metal tends to lose electrons due to low ionization energy. 
40. (c) As the formula of calcium pyrophosphate is $Ca_2P_2O_7$ means valency of pyrophosphate radical is $-$ 4 so formula of ferric pyrophosphate is $Fe_3(P_2O_7)_3$. 
41. (c) $M-X$ bond is a strongest bond so between Na – Cl is a strongest bond. 
42. (b) The solubility order is: $BeF_2 > MgF_2 > CaF_2 > SrF_2 > BaF_2$ so $SrF_2$ is least soluble. 
43. (d) NaF has maximum melting point, melting point decreases of sodium halide with increase in size of halide their bond energy get lower. 
44. (b) Sulphanilic acids have bipolar structure so their melting point is high and insoluble in organic solvents. 
45. (c) $CaCl_2$ will have electrovalent bonding because calcium is electropositive metal while chlorine is electronegative so they will combined with electrovalent bond. 
47. (a) Electrovalent bond is formed by losing electrons from one atom and gaining electron by other atom i.e. redox reaction. 
48. (b) Electrovalent compound are polar in nature because they are formed by ions. 
50. (b) CsCl has ionic bonding. 

ANSWER KEY

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |