Electrovalent bonding

21. Chloride of metal is MCl_2. The formula of its phosphate will be

(a) M_2PO_4 (b) $M_3(PO_4)_2$

(c) $M_2(PO_4)_3$ (d) MPO_4

22. The phosphate of a metal has the formula MPO_4. The formula of its nitrate will be

(a) MNO_3 (b) $M_2(NO_3)_2$

(c) $M(NO_3)_2$ (d) $M(NO_3)_3$

23. In the transition of Zn atoms to Zn^{++}ions there is a decrease in the

(a) Number of valency electrons

(b) Atomic weight

(c) Atomic number

(d) Equivalent weight

24. Phosphate of a metal M has the formula $M_3(PO_4)_2$. The formula for its sulphate would be

(a) MSO_4 (b) $M(SO_4)_2$

(c) $M_2(SO_4)_3$ (d) $M_3(SO_4)_2$

25. The molecular formula of chloride of a metal M is MCl_3. The formula of its carbonate would be

(a) MCO_3 (b) $M_2(CO_3)_3$

(c) M_2CO_3 (d) $M(CO_3)_2$

26. Sodium chloride easily dissolves in water. This is because

(a) It is a covalent compound

(b) Salt reacts with water

(c) It is a white substance

(d) Its ions are easily solvated

27. When $NaCl$ is dissolved in water the sodium ion becomes

(a) Oxidized (b) Reduced

(c) Hydrolysed (d) Hydrated

28. Solid $NaCl$is a bad conductor of electricity since

(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 $M_2(SO_4)_3$. The formula for its phosphate will be

(a) $M(HPO_4)_2$ (b) $M_3(PO_4)_2$

(c) $M_2(PO_4)_3$ (d) MPO_4

31. Ionic bonds are usually formed by combination of elements with

(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

(a) Free electrons

(b) Free ions

(c) Free molecules

(d) Atoms of sodium and chlorine

33. The phosphate of a metal has the formula $MHPO_4$. The formula of its chloride would be

(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

(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

(a) Covalent (b) Ionic

(c) Coordinate (d) Metallic

36. Which one of the following compound is ionic

(a) KCl (b) CH_4

(c) Diamond (d) H_2

37. Which of the following compound has electrovalent linkage

(a) CH_3Cl (b) $NaCl$

(c) CH_4 (d) Cl_2

38. An ionic compound is generally a

(a) Good electrolyte

(b) Weak electrolyte

(c) Non-electrolyte

(d) Neutral

39. What metals combine with non-metals, the metal atom tends to

(a) Lose electrons

(b) Gain electrons

(c) Remain electrically neutral

(d) None of these

40. Chemical formula for calcium pyrophosphate is 120^{o} The formula for ferric pyrophosphate will be

(a) $Fe_3(P_2O_7)_3$ (b) $Fe_4P_4O_{14}$

(c) $Fe_4(P_2O_7)_3$ (d) Fe_3PO_4