

Answer All The Questions

- 1) Which of the following particle having same kinetic energy, would have the maximum de-Broglie wavelength?
(a) α -particle (b) proton (c) β -particle (d) neutron
- 2) Phosphine is _____ of phosphorus.
(a) hydride (b) oxide (c) nitride (d) halide
- 3) In the presence of dilute acids $K_2Cr_2O_7$ oxides H_2S to S, the oxidation state of Sulphur changes from
(a) -2 to +2 (b) -1 to -1 (c) -2 to 0 (d) -1 to 0
- 4) In aqueous solutions and in their solid compounds of Lanthanides, the most common oxidation state is _____
(a) +4 (b) +3 (c) +5 (d) +6
- 5) Select the correct statements: Statement-I: All electron pair acceptors are Lewi's acids
Statement-II: All electron pair donors are Lewi's bases
Statement-III: NH_3 is a Lewi's acid
Statement-IV: H_2O is a Lewi's base
(a) I, II and III (b) II, III and IV (c) I, III and IV (d) I, II and IV
- 6) In a FCC lattice of A and B type atoms are present. A atoms are present at the corners while B type are at face centres. If in each unit cell, two of the A type are missing from the corner, what is the simplest formula of the compound?
(a) A_1B_4 (b) A_7B_{24} (c) A_7B_{20} (d) A_5B_7
- 7) The unit of pseudo first order reaction is
(a) sec^{-1} (b) $lit.mol^{-1}sec^{-1}$ (c) $mol.litre^{-1}$ (d) lit^2sec^{-1}
- 8) Haze is a colloidal solution of:
(a) Solid dispersed in gas (b) gas dispersed in liquid (c) gas dispersed in gas (d) solid dispersed in liquid
- 9) For the titration between oxalic acid and sodium hydroxide, the indicator used in
(a) potassium permanganate (b) Phenolphthalein (c) litmus (d) methylorange
- 10) The relationship between the equilibrium constant and standard emf of a cell is
(a) $E^0=0.0591 \log k$ (b) $0.0591E^0=\log k$ (c) $nE^0=0.0951 \log k$ (d) $nE^0=0.0591 \log k$
- 11) Identify chiral molecule among the following:
(a) Isopropyl alcohol (b) Isobutyl alcohol (c) 2-pentanol (d) 1-bromo-3-butene
- 12) Isomerism exhibited by diols:
(a) functional Isomerism (b) matamerism (c) tautomerism (d) all the above
- 13) Match:

a) Rosenmund's reduction	anhydrous $AlCl_3$
b) Stephen's reaction	ii) $Pd/BaSO_4$
c) Benzoin condensation	iii) $SnCl_2/HCl$
d) Friedel crafts reaction	alcoholic KCN

(a) (i), (iii), (ii), (iv) (b) (iii), (iv), (ii), (i) (c) (iv), (ii), (i), (iii) (d) (ii), (iii), (iv), (i)
- 14) Which order of arrangement is correct in terms of the strength of the acid?
(a) $CH_3CH_2COOH > CH_3COOH < HCOOH < ClCH_2COOH$ (b) $ClCH_2COOH < HCOOH < CH_3COOH < CH_3CH_2COOH$
(c) $CH_3CH_2COOH < CH_3COOH < HCOOH < ClCH_2COOH$ (d) $HCOOH > CH_3CH_2COOH < CH_3COOH > ClCH_2COOH$
- 15) Raffinose is an example of _____ sacchride.
(a) mono (b) di (c) tri (d) poly
