ECAT Chemistry Online Test

Sr	Questions	Answers Choice
1	K_{sp} value for $PbSO_4$= 1.8 x 10^{-8} $mole^2 dm^{-6}$. The maximum concentration of Pb^{++} ions is	A. 1.34 x 10^{-4} mole dm^{-3} B. 1.8 x 10^{-4} C. 3.6 x 10^{-16} mole dm^{-3} D. 1.0 x 10^{-8} mole dm^{-3}
2	The solubility product of AgCl is 2.0 x 10^{-10} $mole^2 dm^{-6}$. The maximum concentration of Ag^+ ions in the solution is	A. 2.0 x 10^{-10} mole dm^{-3} B. 1.41 x 10^{-5} mole dm^{-3} C. 1.0 x 10^{-10} D. 4.0 x 10^{-20} mole dm^{-3}
3	Product of concentration of ions raised to the power equal to the co-efficient of ions in balanced equation for saturated solution of a salt is called	A. Ionic product B. Equilibrium constant K_c C. K_w D. Solubility product (K_{sp})
4	Buffers having pH less than 7 are made	A. Mixture of weak acid + salt of it with strong base B. Mixture of weak acid + salt of it with weak base C. Mixture of weak base + salt of it with strong acid D. Mixture of weak base + salt of it with weak base
5	The relation between Kc and Kp is	
6	pH of the human blood which is essentially maintained constant due to carbonates, biocarbonates, phosphates etc., is	A. 7.00 B. 7.25 C. 7.35 D. 7.47
7	A buffer solution of 0.1 molar HCOOH and 0.1 molar HCCONa has pH = 3.78 To is 0.01 molar HCl is added, then pH of the buffer solution becomes	A. 2.78 B. 4.78 C. 3.78 D. 3.70
8	If pH of buffer of 1 mole dm^{-3} of HCOOH + 0.1 mole dm^{-3} HCOONa having pKa = 3.78 is	A. 1.78 B. 2.78 C. 3.78 D. 4.78
9	pH of 0.1 molar HCl solution is	A. 1 B. zero C. 13 D. 14
10	A buffer of a 0.09 molar acetic acid and 0.11 molar sodium acetate has pH = 4.83. If 0.01 mole NaOH in 1 dm^3 of the buffer solution is added, then pH of the buffer becomes	A. 4.74 B. 4.92 C. 5.0 D. 4.0
11	pH of water is 7, if 0.01 M NaOH is added, than its pH is	A. 12 B. 14 C. zero D. 10
12	pH of 1 molar NaOH is	A. 7 B. zero C. 14 D. 10
13	pKb value of NH_4OH is 4.74. If the concentration of NH_4OH is 1 molar containing 0.1 molar NH_4Cl, then pH of this buffer will be	A. 3.74 B. 10.26 C. 4.74 D. 9.26

14	ph of the buffer CH_3COOh + CH_3COONa is 3.76. If the mixture contains 1 molar acetic acid and 0.1 molar sodium acetate, then pKa of this buffer is	A. 3.76 B. 4.76 C. 5.76 D. 6.76
15	The best buffer is prepared when molar concentrations of the salt and acid are equal, then its pH and pKa value are related	A. pH = pKa B. pH < pKa C. pH > pKa D. pH x pKa = 14
16	pH and pKa of the buffer are related by Henderson equation which is	
17	K_b value of NH_4OH is 1.81 x 10^{-5} and its conjugate acid has K_a= 5.7 x 10^{-10} pKb of the base is 4.74, pKa of its conjugate acid is	A. -4.74 B. 4.74 C. 10 D. 9.26
18	strength of an acid can be determined by	A. P^{ka} B. P^{kp} C. P^{oH} D. P^{kw}
19	When fused $PbBr_2$ is electrolyed then	A. Bromine appears at cathode B. Lead deposited at the cathode C. Lead appears at the anode D. None of these happens
20	An electrochemical cell is based upon	A. Acid-base reaction B. Redox reaction C. Nuclear reaction D. None of the above
21	Sodium metal is obtained by the electrolysis of fused NaCl in cell is called	A. Nelson's cell B. Down's cell C. Daniell cell D. Voltaic cell
22	Question Image	A. -1.10 V B. +1.10 V C. -0.42 V D. +0.42 V
23	Question Image	A. Iodine can oxidise iron B. Bromine can oxidise iron C. Iodine can oxidise bromine D. Iron can oxidise bromine
24	Question Image	A. A strong reducing agent B. A strong oxidising agent C. Better oxidising agent than hydrogen D. Less reducing agent than hydrogen
25	A standard hydrogen electrode (S.H.E) consists of a platinized platinum electrode dipped in 1 molar solution of H^+ ions and hydrogen gas is passed at a pressure of	A. One pascal B. One kilo pascal C. One atmoshpere D. Then atmoshpere
26	Question Image	A. Adding H₂O and H⁺ions B. Adding OH⁻ions C. Adding O²molecules D. Adding O atoms
27	Corrosion reaction are	A. Spontaneous redox reaction B. Non-spontaneous acid-base reactions C. Spontaneous acid-base reactions D. None of these
28	Standard reduction of Zn = -0.76 V and that of Ni is -0.25 V. On coupling them by a salt bridge which of these will act as anode	A. Salt bridge will act as anode B. Zn will act as anode C. Ni will act as anode D. None of these
29	Zn does not displace Mg from $MgSO_4$ solution because	A. Zn is more electropositive than Mg B. Zn is below Mg in electropositive series C. Zn is above Mg in electrochemical series D. Zn is trivalent Mg is divalent
30	Fe can displace Cu form CuSO4solution because	A. Fe is ferromagnetic B. Fe is below Cu in electrochemical series C. Fe is above Cu in electrochemical series D. Fe exists in divalent oxidation state