MDCAT Chemistry Chapter 20 Macromolecules Online Test

Sr	Questions	Answers Choice
1	Which one is correct about conjugate acid-base concept?	A. Conjugate base of a very weak acid is relatively very strong B. Conjugate base of a very weak acid is relatively very weak C. Conjugate base of a very strong acid is relatively very weak D. Both A and C
2	A certain buffer solution contains equal cone. of X- and HX. Ka for HX is 10(-8). The pH of buffer is	A. 3 B. 11 C. 8 D. 14
3	When HCl gas is passed through saturated solution of rock salt, the solubility of NaCl	A. Increases B. May increase or decrease C. Decreases D. None of these
4	The pH of neutral water is 6.8 then the temperature of H2O is	A. 25°C B. More than 25°C C. less than 25 C° D. Not predicted
5	Buffer solutions are used in except	A. Clinical analysis B. Nutrition C. Soil science D. Qualitative analysis
6	Which one of the following has the lowest pH values	A. 0.1 M HCl B. 0.01 M HCl C. 0.1 M KOH D. 0.01 M KOH
7	Which one is very weak acid	A. HF B. HCl C. H2CO3 D. H2O
8	If ionic product is equal to Ksp then the solution is	A. Unsaturatec B. Ideal C. Supersaturated D. Saturated
9	In a saturated solution of AgCl, the molar concentration of Ag+ and Cl- is 1.0x10(-5)M each. What is the value of Ksp	A. 1.0x10(-5) B. 1.0x10(-15) C. 0.1x10(-5) D. 1.0x10(-10)
10	The decomposition of N2O4 to NO2 is carried out at 280°C in chloroform. When quilibrium is reached. 0.2 moles of N2O4 and 0.02 mole of NO2 are present in 1:1 ratio The equilibrium constant for the reaction N2O4------> 2NO2 is	A. 0.01 B. 0.001 C. 0.02 D. 0.002
11	For the reaction H2(g) +I2 (g) <---------> 2HI(g). The equilibrium constant changes with	A. Total pressure B. Catalyst C. Concentration of H2 and I2 D. Temperature
12	In a given system, water and ice are in equilibrium, if the pressure is applied to the above system then	A. Morc ice is formed B. Amount of ice and water will remain the same C. more ice is melted D. both A and B
13	On adding NH3 to water	A. Ionic product will increase B. [H3O+] will inerease C. Ionic product will decrease D. [H3O+] will decrease
14	A basic buffer solution can be prepared by mixing	A. Strong acid and its salt with weak base B. Weak base and its salt with strong acid C. Strong base and its salt with weak

		acid D. Weak acid and its salt with strong base
15	If the temperature is inereased of following reaction, then will go in N2 +3H2 <---------> .2NH3, ΔH= -Ve	A. Forward direction B. Reverse direction C. Remain constant D. Cannot be predicted
16	An excess af silver nitrate is added to the aqueous barium chloride and the precipitate is removed by filtration. What are the main ions in the filtrate?	A. Ag+ and NO3-, only B. NO3- and Ba+2 only C. Ag+ and NO-3, and Ba+2 only D. Cl- and NO-3, and Ba+2 only
17	Buffer action can be explained by except	A. Common ion effect B. Le-Chatelier's principle C. Law of mass action D. Solubility product
18	If the volume term is present in denominator of Kc expression, then which one is correct	A. Increase in pressure will shift the reaction backward B. Increase in pressure will shift the reaction forward direction C. Decrease in volume will shift the reaction forward direction D. Reaction will not effected
19	For N2: +3H2<--------> 2NH3, if Kc is 1 than value of Kp at 273K would be	A. 1/22.414 B. 1/(22.414)2 C. 22.414 D. 11.207
20	A basic buffer solution can be prepared by mixing?	A. Weak acid and its salt with strong base B. Weak base and its salt with strong acid C. Strong acid and its salt with weak base D. Strong base and its salt with strong acid
21	If the concentration of salt is greater than the acid in buffer solution, then the	A. pH = pKa B. pH = pKb C. pH > pKa D. pH < pKb
22	What will be the pH of 1.0 mol dm -3 of H2X, which is only 50% dissociated	A. 1 B. 0 C. 2 D. Less than 0
23	Correct relationship b/w Kc and Kp can be written as	A. Kp=, Kc(R)Δn B. Kc=Kp (RT)Δn C. Kp.= Kc.(RT)Δn D. Kp=Kc (R/N)Δn
24	According to Lowery Bronsted concept, which of the following is considered as an acid?	A. BF3 B. OH- C. H3O+ D. Cl-
25	Which statement is incorrect	A. pH and [OH-] are inversely related to cach other B. pOH and [OH-] are inversely related to each other C. pH and [OH-] are directly related to each other D. pOH means potential of hydroxyl ion concentration
26	In the reaction A2 (g) + 4B2 (g) <----------> 2AB4 (g) such that ΔH < 0, the formation of AB4(g) will be favoured at	A. Low temperature and high pressure B. Low temperature and low pressure C. High temperature and low pressure D. High temperature and high pressure
27	The units of ionic product of H2O is	A. Mole dm-3 B. Mole2 dm-6 C. Mole-1 dm-3 D. Mole-2 dm-6
28	pH of 10-4 mole dm-3 of HCl	A. 2 B. 4 C. 3 D. 5
		A. Decreases

29	With increase in temperature, ionic product of H2O	A. Decreases B. Remains same C. Increases D. May increase or decrease
30	What will be the pH of 1.0 mol dm-3 of NH4OH, which is 1% dissociated	A. 2 B. 12 C. 0 D. 2.7
31	If Kc value is small then equilibrium position will shift	A. Towards left B. Remains unchanged C. Towards right D. It is always constant value
32	For what value of Kc almost forward reaction is complete	A. Kc.=10(-30) B. Kc.=1 C. Kc = 10(30) D. Kc,=0
33	The solubility product of AgCl is 2.0 x 10(-10) mol2 dm(-6). The maximum concentration Ag+ ions in the solution is:	A. 1.41 × 10(-5) mol. dm(-3) B. 1.41 × 10(-10) mol. dm(-3) C. 2.0 × 10(-10) mol. dm(-3) D. 4.0 × 10(-20) mol. dm(-3)
34	The solubility of A2B3 is X mole dm-3. Its Ksp is?	A. 6X(5) B. 36X(5) C. 64X(5) D. 108X(5)
35	Ionization of KClO3. is suppressed by	A. Increasing temperatuse B. adding KCl C. adding NaNO3 D. Decreasing temperature
36	At equilibrium, the concentration of reactants and products are	A. Constant B. Maximum C. Different D. Equal
37	The solubility of Fe(OH)3 is 'x' mole per dm3. Its Ksp would be	A. 9X3 B. 3X4 C. 27X4 D. 9X4
38	Consider the reaction PCl5 (g) <---------> PCl3 (g) +Cl2 (g) in a closed container at equilibrium. At a fixed temperature, what will be the effect of adding more PCl5 on the equilibrium constant	A. It increases B. It remains unaffected C. It decreases D. Can't be predicted without Ki
39	The Kw. of water at 25 C° is given by	A. 10(-7) B. 10(-10) C. 10(-12) D. 10(-14)
40	The value of Kc for H2O at 25C° is	A. 1x10 (-14)mole dm-3 B. 14 mol dm-3 C. 1.86×10(-16) mol dm-3 D. 1.0x10 (-7)moldm-3
41	The oxidation of SO2 to SO3 is exothermic reaction. The yield of SO3 will be maximum if	A. Temperature is increased and pressure is kept constant B. Temperature is reduced and pressure is increased C. Both temperature and pressure are increased D. Both temperature and pressure are increased
42	Which Henderson equation is not correct?	A. pH= pKa +log [salt/acid] B. pH = pKa - log [salt/acid] C. pH= pKa - log[acid/salt] D. Pka = pH - log [salt/acid]
43	pH of an aqueous solution is 3.0 at 25°C. The hydrogen ion concentration in the solution would be	A. 0.001 B. 0.01 C. 0.0001 D. 10(-5)
44	Which one increases by common ion effect except?	A. Crystallization B. Solubility C. Association of ions D. All of these
45	In which of the following Equilibria will Kc and Kp have not the same value	A. 2HI <--------> H2+I2 B. 2SO2 + O2 <--------> 2SO3 C. N2 + O2 <---------> 2NO D. All of these

46	Which of the following is a base according to lowery Bronsted concept?	A. I-1 B. HCl C. H3O+ D. NH4+1
47	The solubility product is only applicable for those substance whose molar concentrations is	A. 0.01 B. Equal to 1 C. Less than 0.01 D. Greater than 10
48	The pH of ideal buffer is	A. 10 B. 7 C. Less than 7 D. 0
49	The most suitable temperature for preparing ammonia gas is	A. 250°C B. 450°C C. 350°C D. 550°C
50	In the reaction A2 (g) + 4B2 (g) <----------> 2AB4 (g) such that $\Delta H < 0$, the formation of AB4(g) will be favoured at	A. Low temperature and high pressure B. Low temperature and low pressure C. High temperature and low pressure D. High temperature and high pressure
51	Which one is best buffer those have	A. pH = pKa B. pH > pKa C. pOH < pKb D. pKa =0