ECAT Chemistry Online Test

Sr	Questions	Answers Choice
1	Question Image	A. 0.02 B. 0.2 C. 50 D. 25
2	The state of equilibrium refers to	A. State of rest B. Dynamic state C. Stationary state D. State of inertness
3	Two moles of HI was heated in a sealed tube at 440°C till the equilibrium was reached. HI was found to be 22% decomposed. The equilibrium constant for dissociation is	A. 0.282 B. 0.0796 C. 0.0199 D. 1.99
4	The avtive mass of 64 g of HI in a two litre flask would be	A. 2 B. 1 C. 5 D. 0.25
5	Which of the following factors will favour the reverse reaction in a chemical equilibrium?	A. Increase in concentration of one of the reactants B. Increase in concentration of one of the products C. Removal of one of the products regularly D. None of these
6	Question Image	A. Favour the formation of N₂O₄ B. Favour the decomposition of N₂O₄ C. Not alter the equilibrium D. Stop the reaction
7	According to Le-Chatelier's principal, adding heat to a solid and liquid in equilibrium will cause the	A. Amount of solid to decrease B. Amount of liquid to decrease C. Temperature to rise D. Temperature to fall
8	Question Image	A. Equal volumes of N₂and H₂are reacting B. Equal masses of N₂and H₂are reacting C. The reaction has stopped D. The same amount of ammonia is formed as is decomposed into N₂and H₂
9	Question Image	A. [A] = [B] B. [A] < [B] C. [B] = [C] D. [A] > [B]
10	Question Image	A. Complete conversion of A to B has taken place B. Conversion of A to B is only 50% complete C. Only 10% conversion of A to B has taken place D. The rate of transformation of A to B is just equal to rate of transformation of B to A in the system
11	The equilibrium constant in a reversible chemical reaction at a given temperature	A. Depends on the initial concentration of the reactants B. Depends on the concentration of one of the products at equilibrium C. Does not depend on the initial concentration of rectants D. It is characteristic of the reaction
		A. Also be doubled

12	In a reversible chemical reaction having two reactants in equilibrium, if the concentration of the reactants are doubled then the equilibrium constant will	B. Be halved C. Becomes one fourth D. Remains the same
13	Question Image	A. 0.60 B. 1.67 C. 0.66 D. 2.6
14	Question Image	A. Forward reaction is favoured B. Backward reaction is favoured C. No effect D. None of the above
15	The bond order in No is 2.5 while that in $NO^+$is 3.Which of the following statements is true for these two species?	A. Bond length in NO⁺is greater than in NO B. Bond length in unpredictable C. Bond length in NO⁺is equal to that in NO D. Bond length in NO is greater than in NO⁺
16	Which carbon is more electronegative?	A. sp³- hybridized carbon B. sp-hybridized carbon C. sp²-hybridized carbon D. always same irrespective of its hybrid state
17	Maximum hydrogen bonds in water are	A. 4 B. 3 C. 2 D. 8
18	In OF_2, number of bond pairs and lone paris of electrons are respectively	A. 2,6 B. 2,8 C. 2,10 D. 2,9
19	Which of the following has zero depole-moment?	A. ClF B. PCl₃ C. SiF₄ D. CFCl₄
20	Number of sigma bonds in $P_4O_{10}$is	A. 6 B. 7 C. 17 D. 16
21	The electronegativeities of F,Cl,Br and I are 4.0,3.0,2.8,2.5 respectively.Hydrogen halide with a high percentage of ionic character is	A. HF B. HCL C. HBr D. HI
22	Shape of $ClO_3$is	A. Triangular pyramidal B. Tetrahedral C. Triangular planar D. Triangular bipyramidal
23	Fluorine molecule is formed by	A. The axial p-p overlap B. The sidewise p-p overlap C. The axial s-p overlap D. The overlap of two sp²hybrid orbitals
24	The boiling point of heavy water is	A. 108°C B. 101.4°C C. 99°C D. 110°C
25	Antibonding MO is formed by	A. Addition of atomic orbitals B. Substraction of atomic orbitals C. Multiplication of atomic orbitals D. None of these
26	The number of antibonding electron pairs in O^{2-}molecular ion on the basis of MOT is	A. 4 B. 3 C. 2 D. 5
		A. One B. Two

27	The bond order of individual C - C bond is benzene is	B. Two C. Between one and two D. One and two alternately
28	The shape of gaseous $SnCl_2$is	A. Tetrahedral B. Linear C. Angular D. T-shaped
29	The shape of the molecule $SF_2Cl_2$is	A. Trigonal bipyradmidal B. Cubic C. Octahedral D. Tetrahedral
30	The most suitable method of the separation of a mixture of ortho and para-nitrophenol mixed in the ratio of 1: 1 is	A. Distrillation B. Crystallization C. Vapourisation D. Colour spectrum