

## ECAT Chemistry Online Test

Sr	Questions	Answers Choice
1	The number of elements in the first, second and third period are	A. 2, 8, 18 B. 8, 2, 18 C. 2, 18, 8 D. 2, 8, 8
2	The horizontal rows in the periodic table are called periods. The number of period are	A. 5 B. 6 C. 7 D. 8
3	The number of groups in the periodic table is	A. 6 B. 7 C. 8 D. 9
4	The period table contains elements in vertical column. these vertical column are called	A. Groups B. Periods C. Blocks D. Sub group
5	In the modern periodic table the elements are placed in the ascending order of their	A. Atomic masses B. Melting points C. Boiling points D. Atomic numbers
6	Doberiner arranged the similar elements into	A. Pairs B. Triads C. Triplets D. Rows
7	The value of activation energy $E_a$ of a reaction can be determined from the value of slope of the straight line obtained by plotting a graph between $1/T$ and $\log k$ . the value of $E_a$ is equal to	A. Slope B. $1/\text{Slope}$ C. $\text{Slope} \times R$ D. $\text{Slope} \times 2.303 R$
8	Which statement about Arrhenius equation is incorrect	A. Factor 'A' called Arrhenius constant depends upon collision frequency of reactants B. Rate of reaction increase by increasing temperature C. Rate constant $k$ is increased D. Activation energy $E_a$ is decreased by rise in temperature
9	The rate constant $k$ of a reaction activation energy $E_a$ and temperature are related by Arrhenius in the form of an equation which is	
10	With increases in temperature of 10 K of the reacting gases the rate of reaction is doubled because	A. Increase in number of collisions B. Number of molecules having energy more than $E_a$ is doubled C. Increase in order of reaction D. Increase in surface area
11	The factor which effect the rate of reaction	A. Nature of reactants B. Surface area C. Light D. All of the above
12	Which of the following is not affected by light	
13	Which one of the following reaction rate is effected by the light	
14	The actual number of atoms or molecules taking part in rate determining step is	A. Rate of reaction B. Velocity of reaction C. Order of reaction D. Molecularly
15	Group I-A elements react with water fastly than the reaction of group II-A elements because	A. I <sub>A</sub> elements are more soft then II <sub>A</sub> B. I <sub>A</sub> elements are non-metals C. I <sub>A</sub> elements have 1 electron in their outermost s-orbital and are strongly electropositive D. I <sub>A</sub> elements make ionic

		bond
16	In an experiment the concentration of a reactant 'A' is doubled the rate increases four times. If concentration is tripled, then rate increases nine times. Thus the rate is proportional to _____ of concentration of 'A'	A. Square root B. Square C. Twice D. Cube
17	Decrease in concentration of reactant is denoted by	A. $dc/dt$ B. $-dc/dt$ C. $+dc/dt$ D. None
18	In thermal decomposition of $N_2O$ the half life period for two different initial concentrations of $N_2O$ are (i) 255 second for initial $N_2O$ 290 mm Hg (ii) 212 second for initial $N_2O$ 360 mm Hg then it is	A. Zero order B. First order C. Second order D. Third order
19	Half life period of a reaction is inversely proportional to the initial concentration of the reactant, then order of reaction is	A. Third order B. Second order C. First order D. Zero order
20	Half life period of $N_2O_5$ is 24 minutes and it remains same when we increase or decrease its initial concentration, then reaction is	A. Zero order B. First order C. Second order D. Third order
21	Question Image	A. 1st order B. 2nd order C. Zero order D. 3rd order
22	Question Image	A. Three times B. Six times C. Nine times D. Two times
23	When we perform the same reaction by taking two different initial concentrations of a reactant for a second order reaction then	A. Reaction becomes exothermic B. Energy of activation is different C. Mechanism of reaction is changed D. Half life period is changed
24	Question Image	A. Initial concentration of reaction B. Initial concentration of products C. Final concentration of products D. Order of the reaction
25	In exothermic reaction decrease in potential energy of the products will result in	A. Decrease in kinetic energy of the particles B. Increase in kinetic energy of the particles C. No change in kinetic energy D. Decrease in activation energy
26	In the hydrolysis of $CH_3COOC_2H_5$ the acid produced is	A. Inhibitor B. Catalyst C. Auto catalyst D. None of above
27	By the use of catalysis the energy of activation is	A. Decreased B. Increased C. Not affected D. None
28	For effective collisions the molecules slow down before collision and their kinetic energy decreases which results in increase in their	A. Activation energy B. Average energy C. Potential energy D. Collision frequency
29	For a chemical reaction to take place the particles must have sufficient energy for the effective collisions, the energy is called	A. Average energy B. Activation energy C. Potential energy D. Collision energy
30	Question Image	A. Measuring pH B. Measuring density C. Titration against standard NaOH D. Titration against standard $KMnO_4$ solution