




## ECAT Chemistry Chapter 11 Reaction Kinetics Online Test

Sr	Questions	Answers Choice
1	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
2	In an experiment the concentration of a reactant 'A' is doubled the rate increases four times. If concentration in tripled, then rate increases nint times. Thus the rate is proportional to _____ of concentration of 'A'	A. Square root B. Square C. Twice D. Cube
3	Decreases om concentration of reactant is denoted by	A. dc/dt B. -dc/dt C. +dc/dt D. None
4	In thermal decomposition of N <sub>2</sub> O the half life period for two different initial concentrations of N <sub>2</sub> O are (i) 255 second for initial N <sub>2</sub> O 290 mm Hg (ii) 212 second for initial N <sub>2</sub> O 360 mm Hg then it is	A. Zero order B. First order C. Second order D. Third order
5	Half life period of a reaction is inversely proportion to the initial concentration of the reactant, then order of reaction is	A. Third order B. Second order C. Fist order D. Zero order
6	Half life period of N <sub>2</sub> O <sub>5</sub> is 24 minutes and it remains same where we increase or decrease its initial concentration, then reactions	A. Zero order B. First order C. Second order D. Third order
7		A. 1st order B. 2nd order C. Zero order D. 3rd order
8		A. Three times B. Six times C. Nine times D. Two times
9	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
10		A. Initial concentration of reaction B. Initial concentration of products C. Final concentration of products D. Order of the reaction
11	In exothermic reaction decrease in potential energy of the products will result in	A. Decreases in kinetic energy of the particles B. Increases in kinetic energy of the particles C. No change in kinetic energy D. Decreases in activation energy
12	In the hydrolysis of CH <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub> the acid produced is	A. Inhibitor B. Catalyst C. Auto catalyst D. None of above
13	By the use of catalysis the energy of activation is	A. Decreased B. Increased C. Not affected D. None
14	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. Collisions frequency

15	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>B. Activation energy</b> C. Potential energy D. Collision energy
16	Question Image	A. Measuring pH B. Measuring density <b>C. Titration against standard NaOH</b> D. Titration against standard $\text{KMnO}_4$ solution
17	Optical rotation method is used when	A. Reaction involve ions B. Change of refractive indices <b>C. Reactions involving change of optical activity</b> D. None of the above
18	Dilatometric method is used for rate determination when	A. Reactions involving change of optical B. Reactions involving change of optical activity <b>C. Reactions involving small volume change</b> D. None of above
19	Refractometric method is used when	A. Reactions involving absorption of I.R. or U. V <b>B. Reactions involving change of refractive index</b> C. Reactions involving ions D. Change of optical activity
20	If a reactant or product of a reaction absorbs radiation, then physical method for determining the rate of reaction is	<b>A. Spectrometry</b> B. Refractometry C. Conductivity measurement D. Optical method
21	To determine the rate of reaction chemically a graphical method is applied. A graph is plotted between the amount or reactant decomposed or product formed against the time. The rate $\frac{dx}{dt}$ at any time is equal to	A. k <b>B. <math>\text{Tangent} \times \frac{1}{a}</math></b> C. $\frac{1}{a}$ , a is initial conc. D. $\frac{1}{a^2}$
22	The reaction rate is expressed in the units of	<b>A. <math>\text{mol dm}^{-3} \text{s}^{-1}</math></b> B. $\text{mol dm}^{-3} \text{min}^{-1}$ C. $\text{mol dm}^{-3} \text{N}^{-1} \text{s}^{-1}$ D. $\text{dm}^{-3} \text{s}^{-1}$
23	Value of rate constant k is specific for a reaction, and varies from reaction to reaction. The value of k of a reaction changes with	A. Time <b>B. Temperature</b> C. Concentration of reactants D. Order of reaction
24	The unit of rate constant k is the same as that of the rate of reaction in	A. First order reaction B. Second order reaction C. Third order reaction <b>D. Zero order reaction</b>
25	Question Image	
26	Question Image	<b>A. Rate is independent of concentration of water since it is in excess</b> B. Rate is independent of concentration of ester since it is in excess C. Rate depends upon the concentration of acid catalyst added D. Rate = $k[\text{CH}_3\text{COOC}_2\text{H}_5]^{\frac{1}{2}}[\text{H}_2\text{O}]^{\frac{1}{2}}$
27	When initial concentration of reactants and order of reaction is given, then its half life period can be calculated by the equation	
28	If initial concentration of the reactants and half life period of the reaction is known, then we can determine	A. Average rate of reaction <b>B. Order of reaction</b> C. Rate constant k D. Instantaneous rate
29	If half life period of a reaction is independent of the concentration of the reactants, then the reaction is	A. Zero order <b>B. First order</b> C. Second order D. Order is in fraction
30	When the rate of reaction is entirely independent of the conc. of reaction molecules then order of reaction is	<b>A. Zero</b> B. First C. Second D. Third