



## ECAT Chemistry Chapter 11 Reaction Kinetics

Sr	Questions	Answers Choice
1	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
2	Dilatometric method is used for rate determination when	A. Reactions involving change of optical B. Reactions involving change of optical activity C. Reactions involving small volume change D. None of above
3	By the use of catalysis the energy of activation is	A. Decreased B. Increased C. Not affected D. None
4	It is common observation that rates of chemical reactions differ :	A. Greatly. B. A little bit. C. Moderately.
5	In the hydrolysis of $\text{CH}_3\text{COOC}_2\text{H}_5$ the acid produced is	A. Inhibitor B. Catalyst C. Auto catalyst D. None of above
6	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
7		A. Small change in concentration of product B. Small time interval C. Co-efficient of the reactant D. Co-efficient of the product
8	The chemical method used for determination of rate of reaction is	A. Spectroscopic B. Conductometric C. Refractometric D. Titration
9	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
10		A. Measuring pH B. Measuring density C. Titration against standard NaOH D. Titration against standard $\text{KMnO}_4$ solution
11	Refractometric method is used when	A. Reactions involving absorption of I.R. or U. V B. Reactions involving change of refractive index C. Reactions involving ions D. Change of optical activity
12	Which of the following is not affected by light	
13	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	
14	The addition of a catalyst to a reaction changes the	A. Enthalpy B. Entropy C. Nature of reactants D. Energy of activation
15	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 $\frac{d_x}{dt}$ at any time is equal to	A. k B. Tangent C. $1/a$ , a is initial conc. D. $1/a^2$

16	In exothermic reaction decrease in potential energy of the products will result in	<p>A. Decreases in kinetic energy of the particles</p> <p>B. Increases in kinetic energy of the particles</p> <p>C. No change in kinetic energy</p> <p>D. Decreases in activation energy</p>
17	With the progressive of the reaction the slope of the curve between concentration of product and time	<p>A. Gradually becomes more steep</p> <p>B. Gradually becomes less steep</p> <p>C. No change occurs in slope</p> <p>D. None of these occurs</p>
18	The rate determining step is the :	<p>A. Slowest step.</p> <p>B. Fastest step.</p> <p>C. Moderate step.</p> <p>D. Both (a) and (b).</p>
19	Question Image	<p>A. Rate is independent of concentration of water since it is in excess</p> <p>B. Rate is independent of concentration of ester since it is in excess</p> <p>C. Rate depends upon the concentration of acid catalyst added</p> <p>D. Rate = <math>k[\text{CH}_3\text{COOC}_2\text{H}_5]^2[\text{H}^+]^{1/2}</math></p>
20	The factor which effect the rate of reaction	<p>A. Nature of reactants</p> <p>B. Surface area</p> <p>C. Light</p> <p>D. All of the above</p>