ECAT Chemistry Chapter 11 Reaction Kinetics Online Test

Sr	Questions	Answers Choice
1	The reaction rate is expressed in the units of	A. Mol dm⁻³S⁻ B. Mol dm⁻³ C. Mol dm⁻³N⁻ D. dm⁻³S⁻
2	With the progressive of the reaction the slope of the curve between concentration of product and time	A. Gradually becomes more steep B. Gradually becomes less steep C. No change occurs in slope D. None of these occurs
3	The rate of reaction determined at a given time is called	A. Average rate B. Instantaneous rate C. Specific rate D. Overall rate
4	In the expression rate = K $[A]^a[B]^b$K is	A. The order of reaction B. The speed of reaction C. The specific rate constant D. The overall order of reaction
5	Question Image	A. Zero B. 253 sec C. 150 sec D. 500 sec
6	The chemical method used for determination of rate of reaction is	A. Spectroscopic B. Conductiometric C. Refractometric D. Titration
7	Activation energy is the difference of energy between the energy of the reactant and	A. The product B. The activated complex C. Both a and b D. None of these
8	Factor which slows down the rate of reaction is	A. Small size of the particles of the reactant B. High temperature of reaction C. More concentration of reactant D. Lowering the temperature
9	A substance which increases the rate of a reaction without being consumed during the reaction is called	A. An autocatalyst B. A catalyst C. A negative catalyst D. All of these
10	Which statement is not correct	A. Enzymes catalyst a specific reaction B. Enzymes show catalytic activity at a specific temperature C. The catalytic activity of enzymes is stopped if optimum pH is changed D. The catalytic activity is poisoned by a co-enzymes
11	The unit of rate of reaction is	A. mole dm⁻³ B. mole Kg⁻¹ C. moles dm⁻³sec⁻¹ D. grams dm⁻³
12	Question Image	A. Small change in concentration of product B. Small time internal C. Co-efficient of the reactant D. Co-efficient of the product
13	In the rate equation when the concentration of reactants are unity, then rate is equal to	A. Instantaneous rate B. Average rate C. Active mass of products D. Specific rate constant
14	The rate of reaction determined at a given time is called	A. Average rate B. Instantaneous rate C. Specific rate D. Overall rate
15	The rate of reaction between two specific time intervals is called	A. Instantaneous rate B. Average rate C. Specific rate

		D. Ordinary rate
16	In the hydrolysis of $CH_3COOC_2H_5$ the acid produced is	A. Inhibitor B. Catalyst C. Auto catalyst D. None of above
17	The sum of the exponents of the conc. terms in the rate equation is called	A. Rate of reaction B. Order of reaction C. Specific rate constant D. Average rate
18	The rate of reaction is denoted by	A. dc/dp B. dc/ac C. dc/dT D. dc/dt
19	Question Image	A. Zero B. 1 C. 2 D. 1.5
20	Question Image	A. First order B. Pseudo first order C. Second order D. Zero order
21	Question Image	A. Rate = k[FeCl₃] [Kl]² B. Rate = k[Fe⁺³][Cl⁻¹] [Kl] C. Rate = k[Fe⁺³] [Cl⁻¹][K;] D. Rate = k[Kl]³[FeCl₃]°
22	The experimental relationship between a reaction rate and the concentration of reactants is called	A. Order or reaction B. Rate law C. Activated complex D. Molecularity
23	When the rate of reaction is entirely independent of the conc. of reaction molecules then order of reaction is	A. Zero B. First C. Second D. Third
24	If half life period of a reaction is independent of the concentration of the reactants, then the reaction is	A. Zero order B. First order C. Second order D. Order is in fraction
25	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. Order of reaction C. Rate constant k D. Instantaneous rate
26	When initial concentration of reactants an order of reaction is given, then its half life period can be calculated by the equation	
27	Question Image	A. Rate is independent of concentration of water since it is in excess B. Rate is independent of concentration of ester since it is in exces C. Rate depends upon the concentration of acid catalyst added D. Rate = k[CH₃COOC₂H₅] ^{1/2}[H₂O]^{1/2}
28	Question Image	
29	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 D. Zero order reaction
30	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. Temperature C. Concentration of reactants D. Order of reaction
31	The reaction rate is expressed in the units of	A. mol dm⁻³S⁻ B. mol dm⁻³ C. mol dm⁻³N⁻ D. dm⁻³S⁻
32	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 d_x/d_t at any time is equal to	A. k B. Tangentθ C. 1/a, a is initial conc. D. 1/a²

		D. 1/4 ^{2 4}
33	If a reactant or product of a reaction absorbs radiation, then physical method for determining the rate of reaction is	A. Spectrometry B. Refractometry C. Conductivity measurement D. Optical method
34	Refrectrometric 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
35	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
36	Optical rotation method is sued when	A. Reaction involve ions B. Change of refractive indices C. Reactions involving change of optical activity D. None of the above
37	Question Image	A. Measuring pH B. Measuring density C. Titration against standard NaOH D. Titration against standard KMnO₄solution
38	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
39	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
40	By the use of catalysis the energy of activation is	A. Decreased B. Increased C. Not affected D. None
41	In the hydrolysis of $CH_3COOC_2H_5$the acid produced is	A. Inhibitor B. Catalyst C. Auto catalyst D. None of above
42	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
43	Question Image	A. Initial concentration of reaction B. Initial concentration of products C. Final concentration of products D. Order of the reaction
44	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
45	Question Image	A. Three times B. Six times C. Nine times D. Two times
46	Question Image	A. 1st order B. 2nd order C. Zero order D. 3rd order
47	Half life period of $N_2O_5$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
48	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
49	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

50	Decreases om concentration of reactant is denoted by	A. dc/dt B. -dc/dt C. +dc/dt D. None
51	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
52	Group I-A elements react with water fastly than the reaction of group II-A elements because	A. I_Aelements are more soft then II_A B. I_Aelements are non-metals C. I_Aelements have 1 electron in their outermost s-orbital and are strongly electropositive D. I_Aelements make ionic bond
53	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
54	Which one of the following reaction rate is effected by the light	
55	Which of the following is not affected by light	
56	The factor which effect the rate of reaction	A. Nature of reactants B. Surface area C. Light D. All of the above
57	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 Ea is doubled C. Increase in order of reaction D. Increase in surface area
58	The rate constant k of a reaction activation energy Ea and temperature are related by Arrhenius in the form of an equation which is	
59	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 Ea is decreased by rise in temperature
60	The value of activation energy Ea 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 Ea is equal to	A. Slope B. 1/Slope C. Slope x R D. Slope x 2.303 R
61	A catalyst is a substance which increase the rate of a chemical reaction, but remains unchanged at the end of reaction, nut remains unchanged at the end of reaction, because	A. It increases the temperature B. It increase the surface area C. It increases the rate constant D. It decrease the energy energy of activation
62	Homogenous catalysis is that in which catalyst and reactants are in same phase. Which one of the following reaction is a homogenous catalysis	
63	which one of the following is a heteroheneous catalysis	
64	Platinum is poisoned by	A. Arsenic B. Silver C. Argon D. Zinc
65	Question Image	A. Homogeneous B. Heterogeneous C. Isogeneous D. None
66	The effective activity of a metal catalyst is increased if it is in	A. Solid form B. Liquid state C. Gaseous state D. Finely divided form
67	The catalytic activity of Pt is much higher when	A. It is mixed with asbestos B. It is mixed with Pd C. It is mixed with arsenic D. In is made colloidal platinum
68	In the manufacture of $NH_3$by Haber's process catalyst used is iron its catalytic efficiency is poisoned by	A. Presence of Al₂O₃ B. Presence of Cr₂O₃ C. MnO₂ D. CO present with H₂gas

69	Hydrogenation of vegetable oils is accelerated by Ni catalyst. The catalytic activity of Bi is increased by a promoter of activator which is	A. Na and K B. Na and Hg C. Hg and Zn D. Cu and Te
70	In the reaction of oxalic acid with $KMnO_4$and $H_2SO_4$is slow at the beginning but after sometimes the reaction becomes faster due to	A. Formation of MnSO₄which acts as 'Auto catalyst B. Formation of CO₂which acts as 'Auto catalyst C. Formation of K₂SO₄which acts as 'Auto catalyst D. Evolution of O₂gas which acts as 'Auto catalyst
71	When copper is allowed to react with HNO_3, the reaction is slow in the beginning, finally becomes very fast. It is due to the formation of an auto catalyst which is	A. Cu(NO₃)₂ B. CuO C. O₂ D. HNO₂
72	Question Image	A. Diastase B. Lipase C. Inverters D. Zymase
73	Complex protein molecules which catalyses the organic reactions in the living cells are called	A. Living organisms B. Enzymes C. Viruses D. Bacteria
74	_____ are called biocatalysts	A. Organic acids B. Organic bases C. Enzymes D. All
75	The number of atoms or molecules whose concentrations determine the rate of the reaction is called	A. Molecularity B. Order C. Rate of reaction D. Rate constant
76	The experimental relationship between a reaction rate and the concentration of reactants is known as	A. Order B. Molecularity C. Rate constant D. Rate law
77	Which of the following factors does not influenced the rate of reaction	A. Concentration of the reaction B. Nature of the reactants C. Molecularity of the reaction D. Temperature
78	The addition of a catalyst to a reaction changes the	A. Enthalpy B. Entropy C. Nature of reactants D. Energy of activation
79	If the rate of reaction is independent of the concentration of the reactant, the reaction is of	A. Zero order B. First order C. Second order D. Third order
80	Question Image	A. 2 B. 3 C. 4 D. 9
81	A white precipitate ofsilver chlorideimmediately formed on additionof :	A. Silver nitrate solution to sodium chloride solution. B. Silver chloride solution to sodium nitrate solution. C. Silver nitrate solution to potassium chloride solution D. Silver nitrate solution to hydrogen chloride solution.
82	A white precipitate ofsilver chlorideimmediately formed on additionof :	A. Silver nitrate solution to sodium chloride solution. B. Silver chloride solution to sodium nitrate solution. C. Silver nitrate solution to potassium chloride solution D. Silver nitrate solution to hydrogen chloride solution.
83	Which of the following reactions occur at moderate rate :	A. Rusting of iron B. Chemical weathering of stone work of buildings by acidic gases in atmosphere. C. Hydrolysis of an ester D. Fermentation of sugars
84	All reactions occur in :	A. A single step. B. A series of steps C. Two steps. D. Both (a) and (b)
85	The rate determining step is the :	A. Slowest step. B. Fastest step. C. Moderate step.

		D. Both (a) and (b).
86	Which of the following will affect the rate :	A. First step of reaction. B. Last step of reaction. C. Rate determining step. D. Fastest step.
87	It is common observation that rates of chemical reactions differ :	A. Greatly. B. A little bit. C. Moderately.
88	Which of the following may affect the rate constant (k) fro a reaction :	A. Change in concentration. B. Change in pressure. C. Change in pH. D. Change in temperature.
89	The change in concentration of reactant or product per unit time is called :	A. Rate constant. B. Rate of reaction. C. Rate equation. D. Rate law.
90	Rate of chemical reaction depends upon :	A. The number of total collisions per second. B. Number of molecules taking part in a chemical reaction. C. Number of fruitful collisions per second D. Number of fruitless collisions per second.
91	Which statement is true about order of reaction :	A. Order of reaction can only be determined by an experiment. B. Order of reaction can be determined from a balance equation only. C. Order of reaction increase by increasing temperature. D. Order of reaction must be in whole number and not in fraction.
92	The unit of rate constant K is $mole^{-1}$ dm^3 for a chemical reaction, the order of reaction is :	A. Order of reaction can determined by an experiment B. Order of reaction can determined from a balance equation only. C. Order of reaction can determined increases by increasing temperate. D. Order of reaction must be in whole number and not in fraction.
93	The unit rate of constan K is $mole^{-1}$ dm^3S^{-1} for a chemical reaction, the order of reaction is :	A. 3 B. 2 C. 1 D. 0
94	Hydrolysis of ethyl-acetate (ester) has order of reaction :	A. 3 B. 2 C. 1 D. 1
95	It rate law of an equation is written as $dx/dt=K[A][B]$?	A. Reaction is independent of the concentration of A and B. B. Product is decreasing with passage of time. C. Reactant in increasing with passage of time. D. Reactant is increasing with passage of time.
96	The example of a photo chemical reaction is photosynthesis has order of reaction :	A. 1 B. 2 C. 0 D. 3
97	Rate law of an equation is obtained :	A. From a balance equation. B. Can be calculated theoretically as well as determined experimentally. C. It is only calculated theoretically. D. Experimentally.
98	A pseudo uni-molecular reaction has order of reaction :	A. 3 B. 2 C. 1 D. 0
99	A zero order reaction is one in which :	A. Rate is not affected by changing concentration of reactants. B. concentration of reactants do not change with the passage of time. C. Reactants do not react. D. One reactants in large excess.
100	The rate equation for a reaction is Rate =k[A]. what are unit of K ?	A. Mole-1 dm³ S⁻¹<o:p></o:p> B. Mole dm³ S⁻¹<o:p></o:p> C. Moledm³<o:p></o:p>

		D. S⁻¹<o:p></o:p>
101	The unit of the rate constant is the same as that of rate of reaction in :	A. Third order reaction B. Second order reaction C. First order reaction D. Zero order reaction
102	Half life period of a first order reaction is independent of:	A. Presence of catalyst. B. Conditions of temperature C. Initial concentration of the compound D. All of above
103	If the rate of decay of radioactive isotope decreases from 200 cpm to 25 cpm after 24 hours, what is its half life :	A. 8 hours B. 6 hours C. 4 hours D. 3 hours
104	The rate of reaction b/w two specific time intervals is called :	A. Instantaneous rate of reaction. B. Average rate of reaction. C. Rate of a reaction. D. Minimum rate of a reaction.
105	Dilatometer method is useful for the reaction that involve :	A. Small volume changes in solutions B. Change in infractive indices C. Where reactants absorb U.V, visible or infrared radiation
106	The rate of reaction :	A. Decreases as the reaction proceeds B. Increases as the reaction proceeds C. May decrease or increase reaction proceeds D. Remains same as the reaction proceeds
107	Which technique is used to determine the absorption of radiations?	A. Dilatometer method<o:p></o:p> B. Optical rotation method<o:p></o:p> C. Spectrometry<o:p></o:p> D. Refractometric method<o:p></o:p>
108	In zero order reaction, the rate is independent of :	A. Temperature of reaction B. Concentration ofreactants C. Concentration of products D. None of these.
109	If the rate equation of a reaction 2A+B-------->Products is , Rate = K[A] [B], and A is present in large excess, then order of reaction is :	A. 1 B. 2 C. 3 D. Above
110	The rate of reaction :	A. Increase as the reaction proceeds. B. Decreases as the reaction proceeds. C. Remains the same as the reaction proceed. D. May decrease or increase as the reaction proceeds.
111	With increases of 10°C temperature the rate of reactiondoubles. This increase in rate of reactionis due to :	A. Decrease in activation energy or reaction. B. Decrease in number of collisions between reactant molecules. C. Increase in activation energy of reactants. D. Increase in number of effective collisions
112	The unit of rate constant is the same as that of the rate of reaction in :	A. First order reaction. B. Second order reaction. C. Zero order reaction. D. Third order reaction.