

Reaction Kinetics

Sr	Questions	Answers Choice
1	Rate constant can be determined by	A. Titration B. spectroscopy C. conductometry D. all of these
2	k has unit s ⁻¹ for	A. First order B. Second order C. Third order D. zero order
3	Mechanism supports	A. Hess's law B. Kinetic data C. Le chatelier's principle D. Boyle's law
4	Which unit is common for all orders	A. mol dm ⁻³ B. No common unit C. J mol ⁻¹ D. s ⁻¹
5	Units of rate constant depend on	A. Order of reaction B. Temperature C. Surface area D. Pressure
6	Catalyst usually act in	A. Initiation step B. Rate determining step C. Fast step D. Intermediate formation
7	In color change reactions, which method is best	A. Colorimetry B. Titration C. Conductometry D. Manometry
8	On a Boltzmann distribution curve, the activation energy is represented by	A. The height of the peak B. The area under the entire curve C. A vertical line drawn at a specific kinetic energy value D. The difference between the peak and the X axis
9	Rate of fastest	A. At start B. In middle C. At end D. After completion
10	On an energy profile diagram the presence of a catalyst is represented by	A. A high peak representing the activation energy B. A lower peak representing the activation energy C. A change in the energy level of the reactants or products D. A shift in the equilibrium position
11	Overall order is sum of	A. Coefficients B. Exponents in rate law C. Moles D. Products
12	Half life formula for 1st order reaction is	A. $0.693 / k$ B. $k \times t$ C. $1 / k$ D. $2 k$
13	Which factor affects rate of reaction.	A. Concentration B. Temperature C. Surface Area D. All of these
14	On Boltzmann distribution curve, the area under the curve represents.	A. Activation energy of the reaction B. Total number of molecules in the sample C. Average kinetic energy of the

		molecules D. Rate constant of the reaction
15	Half life is time is which	A. Rate becomes zero B. Concentration reduces to 1/4 C. Concentratio reduces to half D. Product is half formed
16	A reaction mechanism describes	A. Experimental conditions B. Overall stoichiometry C. Stepwise molecular events D. Heat of reaction
17	Unit of rate constant for first order reaction is	A. mol dm ⁻³ B. mol ⁻¹ dm ³ s ⁻¹ C. s ⁻¹ D. J mol ⁻¹
18	Half life of zero order reaction is	A. Constant B. Proportional to [A] C. Inversely proportional with [A] D. Independent to rate constant
19	The rate determinig step in a multistep reaction is	A. The slowest step B. Always the first step C. Always the last step D. The fastest step
20	Homogenous catalysts are in	A. Same phase as reactio ⁿ s B. Different phase C. Solid only D. Gaseous only