

Reaction Kinetics

Sr	Questions	Answers Choice
1	The units of the rate constant (k) for a reaction depend on the	A. Activation energy of the reaction B. Temperature of the reaction C. Overall order of the reaction D. Stoichiometry of the balanced chemical equation
2	Increase in surface area	A. Increases rate B. Decreases rate C. No effect D. Stops reaction
3	In an energy profile, peak represents.	A. Reactants B. Activated complex C. Products D. Catalyst
4	Half life of first order reaction	A. Become zero B. Increases with [A] C. Is independent of [A] D. Decreases with [A]
5	The rate determining step in a multistep reaction is	A. The slowest step B. Always the first step C. Always the last step D. The fastest step
6	In energy profile diagram a catalysts.	A. Increase activation energy B. Decreases activation energy C. Provide new pathway D. Both b and c
7	Units of rate constant depend on	A. Order of reaction B. Temperature C. Surface area D. Pressure
8	Unit of rate constant for zero order reaction is	A. $\text{mol dm}^{-3} \text{ s}^{-1}$ B. s^{-1} C. $\text{mol}^{-1} \text{ dm}^3 \text{ s}^{-1}$ D. $\text{mol}^{-2} \text{ dm}^6 \text{ s}^{-1}$
9	Catalyst usually act in	A. Initiation step B. Rate determining step C. Fast step D. Intermediate formation
10	How does the presence of a catalyst affect the rate of a chemical reaction	A. It always decreases the rate of the reaction B. It always increases the rate of the reaction C. It increases the rate of the forward and decreases the rate of the reverse reaction D. It increases the rate of both the forward and reverse reactions
11	Rate of fastest	A. At start B. In middle C. At end D. After completion
12	A reaction mechanism describes	A. Experimental conditions B. Overall stoichiometry C. Stepwise molecular events D. Heat of reaction
13	Which unit is common for all orders	A. mol dm^{-3} B. No common unit C. J mol^{-1} D. s^{-1}
14	The lowest step in a mechanism is	A. Fast step B. Activation step C. Rate determining step D. Intermediate formation

		D. Initiation step
15	Half life formula for 1st order reaction is	A. $0.693/k$ B. $k \times t$ C. $1/k$ D. $2k$
16	A flat curve in rate vs time graph indicate.	A. Reaction completed B. High rate C. Constant rate D. Temperature increase
17	Overall order is sum of	A. Coefficients B. Exponents in rate law C. Moles D. Products
18	Energy profile shows	A. Concentration B. Temperature C. Energy vs reaction progress D. Time
19	Homogenous catalysts are in	A. Same phase as reactants B. Different phase C. Solid only D. Gaseous only
20	In color change reactions, which method is best	A. Colorimetry B. Titration C. Conductometry D. Manometry