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**CHAPTER 11****REACTION KINETICS****MULTIPLE CHOICE QUESTIONS**

- The unit of rate constant 'K' for a first order reaction:**  
(a)  $\text{sec}^{-1}$  (b)  $\text{mol} \cdot \text{dm}^{-3} \cdot \text{sec}$   
(c)  $\text{mol} \cdot \text{dm}^{-3} \cdot \text{sec}^{-1}$  (d)  $\text{mol}^{-1} \cdot \text{dm}^3 \cdot \text{sec}$
- If the rate of decay of radio-active isotope decreases from 200 cpm to 25 cpm after 24 hours. What is its half life:**  
(a) 3 hours (b) 4 hours  
(c) 6 hours (d) 8 hours
- In a multistep reaction, the slowest step is:**  
(a) Mechanism step (b) Rate determining step  
(c) Enthalpy determining step (d) None of above
- The rate of reaction between two specific time intervals is called:**  
(a) Rate of reaction (b) Average rate  
(c) Instantaneous rate (d) None
- When rate of reaction is retarded by adding a substance, it is said to be:**  
(a) Catalyst (b) Negative catalyst  
(c) Autocatalyst (d) None of the above
- Rate =  $K[A]^2[B]$  for the reaction  $2A + B \longrightarrow \text{Product}$  and 'A' is present in large excess, then order of reaction is:**  
(a) 1 (b) 2  
(c) 3 (d) 4
- The unit of the rate constant is the same as that of the rate of reaction is:**  
(a) 1<sup>st</sup> order reaction (b) 2<sup>nd</sup> order reaction  
(c) Zero order reaction (d) 3<sup>rd</sup> order reaction



8. The rate equation for a reaction is  $\text{Rate} = K[A]$ , what are the units of K:  
(a)  $\text{s}^{-1}$  (b)  $\text{mol} \cdot \text{dm}^{-3}$   
(c)  $\text{mol} \cdot \text{dm}^{-3} \cdot \text{s}^{-1}$  (d)  $\text{mol}^{-1} \cdot \text{dm}^3 \cdot \text{s}^{-1}$
9. The half life of zero order reaction is:  
(a) Proportional to initial concentration of reactants  
(b) Independent of initial concentration of reactant  
(c) Inversely proportional to initial concentration of reactant  
(d) None of these
10. Photosynthesis has order of reaction:  
(a) 0 (b) 1  
(c) 2 (d) Fractional order
11. The unit of rate constant "K" is  $\text{mol}^{-1} \cdot \text{dm}^3 \cdot \text{sec}^{-1}$  for a chemical reaction the order of reaction is:  
(a) 0 (b) 1  
(c) 2 (d) 3
12. Which types of metals are usually used as catalyst:  
(a) Coinage metal (b) Alkali metals  
(c) Transition metal (d) Alkaline earth metal
13. A substance which itself is not a catalyst but increases the activity of a catalyst is called:  
(a) Promoter (b) Poison  
(c) Inhibitor (d) Enzyme
14. Enzymes are:  
(a) Micro-organism (b) Proteins  
(c) Moulds (d) Inorganic compound
15. The change in concentration of reactants or products per unit time is called:  
(a) Rate law (b) Rate of reaction  
(c) Rate constant (d) Rate equation
16. Which technique is used to determine the absorption of radiations:  
(a) Spectrometry (b) Dilatometric method  
(c) Refractometric method (d) Optical rotation method
17. Which property of a liquid is measured by polarimeter:  
(a) Conductance (b) Refractive index  
(c) Optical activity (d) Change in volume
- .....



**answers**

|            |     |            |     |            |     |            |     |            |     |
|------------|-----|------------|-----|------------|-----|------------|-----|------------|-----|
| <b>1.</b>  | (a) | <b>2.</b>  | (d) | <b>3.</b>  | (b) | <b>4.</b>  | (b) | <b>5.</b>  | (b) |
| <b>6.</b>  | (a) | <b>7.</b>  | (c) | <b>8.</b>  | (a) | <b>9.</b>  | (a) | <b>10.</b> | (a) |
| <b>11.</b> | (c) | <b>12.</b> | (c) | <b>13.</b> | (a) | <b>14.</b> | (b) | <b>15.</b> | (b) |
| <b>16.</b> | (a) | <b>17.</b> | (c) |            |     |            |     |            |     |

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