

Weekly Test 12th Chemistry

Chapter - Chemical kinetics

Time :- 55 minutes

M. Marks :- 30

1. For the reaction, $2X + Y + Z \rightarrow \text{Products}$

If the rate law is : $\text{Rate} = k[X][Y]^2$
 What happens to the rate of a reaction, if the conc. of Y is doubled. (1)

2. For a rxn. $A_2 + 2B_2 \rightarrow 2AB_2$, write the rate law expression in terms of rate of disappearance of A_2 . (1)

3. What are the orders of the reactions :-

(i) when the rate constant for a reaction is $2.45 \times 10^{-3} \text{ mol L}^{-1} \text{ s}^{-1}$

(ii) $\text{Rate} = k[X]^{1/2}[Y]^{3/2}$

($1/2 \times 2 = 1$)

4. For a reaction $A + B \rightarrow \text{Products}$, the rate law is $\text{Rate} = k[A][B]^{3/2}$. Can the reaction be an elementary reaction? Explain. (1)

5. Differentiate b/w the rate of a chemical reaction and rate constant for the reaction. (1.5)

6. Consider the following data :-

Exp.	[X]	[Y]	Initial Rate
1.	0.12	0.35	0.1
2.	0.24	0.70	0.8
3.	0.24	0.35	0.1
4.	0.12	0.70	0.8

Write the correct rate law (1.5)