LAKSHYA (JEE)

Chemical Kinetics

DPP-07

1. The rate constant is numerically the same for three reactions of first second and the order respectively. Which one is true at a moment for rate of three reaction if concentration of reactants is same and greater than 1 M.
   (A) $r_1 = r_2 = r_3$ (B) $r_1 > r_2 = r_3$
   (C) $r_1 < r_2 < r_3$ (D) All

2. Which is incorrect
   (A) Half-life of a first order reaction is independent of initial concentration
   (B) Rate of reaction is constant for first order reaction
   (C) Unit of K for second order reaction is Mol^{-1} lit sec^{-1}
   (D) None

3. A reaction is found to have the rate constant x sec^{-1} by what factor the rate is increased initial conc. of A is tripled
   (A) 3 (B) 9
   (C) x (D) Remains same

4. The rate constant for a reaction is 10.8×10^{-5} mol L^{-1} S^{-1}. The reaction obeys–
   (A) First order (B) Zero order
   (C) Second order (D) All are wrong

5. From different sets of data of $t_{1/2}$ at different initial concentrations say 'a' for a given reaction, the [$t_{1/2} \times a$] is found to be constant. The order of reaction is:
   (A) 0 (B) 1
   (C) 2 (D) 3

6. The $t_{1/2}$ of a reaction is halved as the initial concentration of the reactant is doubled. What is the order of reaction?
   (A) First order (B) Zero order
   (C) Second order (D) Third order

7. The half-life period for calalytic decomposition of AB_3 at 50 mm is found to be 4 hrs and at 100 mm it is 2 hrs. The order of reaction is:
   (A) 3 (B) 1
   (C) 2 (D) 0

ANSWERS

1. (C)
2. (B)
3. (A)
4. (B)
5. (C)
6. (C)
7. (C)

Note - If you have any query/issue

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