

PYQSide

JEE MAIN CHEMICAL KINETICS — INTEGRATED RATE LAW OF ZERO ORDER REACTION — PYQS

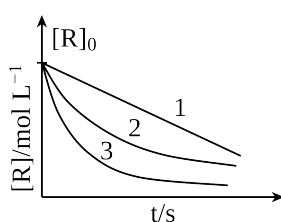
Max. Marks: 12

Questions: 3

Section A (MCQ)

- Q.1** Consider the given graph showing variation of reactant concentration with time. Three different reactions were started with identical initial concentration of reactants. Which of the following statement is correct?

[JEE Main 2026 (Online) 4th April Evening Shift]



- (1) The order of all the three reactions is same.
- (2) The rate constant of reaction 3 is larger than the rate constant of reaction 2 if the order of reaction is same for both.
- (3) The SI unit of rate constant of reaction 1 is s^{-1} .
- (4) Thermal decomposition of HI on gold surface is an example of reaction 2.

Scan or tap for the full solution



- Q.2** Half life of zero order reaction $A \longrightarrow \text{product}$ is 1 hour, when initial concentration of reactant is 2.0 mol L^{-1} . The time required to decrease concentration of A from 0.50 to 0.25 mol L^{-1} is :

[JEE Main 2025 (Online) 4th April Evening Shift]

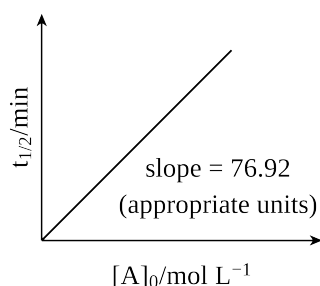
- (1) 0.5 hour (2) 15 min (3) 60 min (4) 4 hour

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Section B (Numerical)

- Q.3** For the reaction $A \longrightarrow \text{products}$.



The concentration of A at 10 minutes is _____ $\times 10^{-3} \text{ mol L}^{-1}$ (nearest integer). The reaction was started with 2.5 mol L^{-1} of A.

[JEE Main 2025 (Online) 2nd April Morning Shift]

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ANSWER KEY

Section A (MCQ)

Ques.	1	2									
Ans.	2	2									

Section B (Numerical)

Ques.	3						
Ans.	2435						