

Step Academy official

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| STUDENT NAME | |
| PAPER CODE | 67261 |
| TIME ALLOWED | 40 |
| Paper Date | 20-02-2026 |



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|-------------|------------------------|
| CLASS | New 1st Year (FSC/ICS) |
| SUBJECT | Chemistry |
| TOTAL MARKS | 25 |
| Paper Type | |

Q1. Choose the correct answer.

5X1=5

1. Arrhenius equation can be used to determine:

(A) Ionization energy (B) Potential energy (C) Internal energy (D) Activation energy

2. Marble is most reactive with H_2SO_4 in:

(A) Large chunk (B) Bricks form (C) Granular form (D) Powder form

3. The reaction having rate equation, Rate = $K [\text{H}_2][\text{NO}]^2$ if Hydrogen is present in large excess, the order of reaction is:

(A) 1st order (B) 2nd order (C) 3rd order (D) Pseudo first order

4. Photochemical reactions usually have order:

(A) 1st (B) 2nd (C) 3rd (D) Zero

5. The units of rate of reaction are:

(A) Moles $\text{dm}^{-3} \text{ sec}^{-1}$ (B) Mole-1 $\text{dm}^3 \text{ sec}^{-1}$ (C) Moles $\text{dm}^{-3} \text{ sec}$ (D) Mole-1 $\text{dm}^3 \text{ sec}$

Q2. Write short answers of the following questions.

10X2=20

1. What is energy of activation?

2. What is meant by elastic collision?

3. Rate of reaction changes with time. Why?

4. Describe how surface area affects rate of reaction?

5. How Nature of Reactants effect the rate of reaction?

6. How does the increase of temperature increases the rate of the chemical reactions?

7. Differentiate catalysis and heterogeneous catalysis.

8. What is meant by order of reaction?

9. Explain zero order reaction?

10. What are pseudo first order reaction?