

# Class 10 Science – Chemical Reactions and Equations – Topic: Types of Chemical Reactions (Topic Test)

ALPHA CLASSES DEOBAND | Session 2026–27 | CBSE Board Pattern

Name: \_\_\_\_\_ Roll No.: \_\_\_\_\_ Date: \_\_\_\_\_

Time: 40 minutes | Maximum Marks: 25

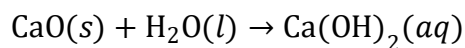
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**General Instructions:** - All questions are compulsory. - Show all working steps and write balanced equations with state symbols wherever required. - Marks are indicated against each question.

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## Section A – Very Short Answer (1 mark each)

**Q1.** What type of reaction is represented by the following equation? Is it exothermic or endothermic? [1 mark]



**Q2.** Name the type of decomposition reaction that occurs when silver bromide (AgBr) is exposed to sunlight. [1 mark]

**Q3.** In the reaction  $\text{Fe}(s) + \text{CuSO}_4(aq) \rightarrow \text{FeSO}_4(aq) + \text{Cu}(s)$ , which element is displaced and why? [1 mark]

**Q4.** What is a precipitation reaction? Give one example. [1 mark]

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## Section B – Short Answer Type (2 marks each)

**Q5.** Distinguish between combination and decomposition reactions with one example each. [2 marks]

**Q6.** Write the balanced chemical equation for the thermal decomposition of lead nitrate. Name the brown gas evolved. [2 marks]

**Q7.** What happens when zinc granules are added to dilute sulphuric acid? Write the balanced equation and identify the type of reaction. [2 marks]

**Q8.** Give one example each of an exothermic and an endothermic reaction from daily life. Write the equations. [2 marks]

**Section C – Short Answer Type II (3 marks each)**

**Q9.** Explain the three sub-types of decomposition reactions (thermal, electrolytic, and photolytic). Write one balanced equation for each. [3 marks]

**Q10.** A student mixes sodium sulphate solution with barium chloride solution. A white insoluble substance is formed. Write the balanced equation, name the white substance, and identify the type of reaction. [3 marks]

**Q11.** Why is respiration considered an exothermic reaction? Write the equation for aerobic respiration and explain how energy is released. [3 marks]

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**Section D – Long Answer / HOTS (4 marks)**

**Q12.** An iron nail is dipped in copper sulphate solution and left for 30 minutes.

- State two observations you would make. [1 mark]
  - Write the balanced chemical equation with state symbols. [1 mark]
  - Identify the type of chemical reaction. [1 mark]
  - If a gold nail were used instead of an iron nail, would the same reaction occur? Give a reason for your answer. [1 mark]
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*All the best!*

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