



**SUBJECT: CHEMISTRY**

**CLASS 10**

**CHAPTER 1: CHEMICAL REACTIONS AND EQUATIONS**

**Guidelines**

Dear Students

- ✚ Revisit the concepts discussed in E lessons 1 and 2
- ✚ Attempt these questions in your notebook
- ✚ Refer to N.C.E.R.T for any clarification
- ✚ Link of the chapter is as follows:

<http://ncert.nic.in/textbook/textbook.htm?jesc1=1-16>

**SUB TOPIC: Revision of the concepts taught in the previous E lessons**

1. Identify the reactants and the products in the following reactions:

- i)  $\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \longrightarrow \text{BaSO}_4 + 2\text{NaCl}$   
ii)  $\text{CaCO}_3 \longrightarrow \text{CaO} + \text{CO}_2$   
iii)  $\text{Fe} + \text{CuSO}_4 \longrightarrow \text{FeSO}_4 + \text{Cu}$

2. Find the errors in the following chemical equations and balance them:

- (i)  $2\text{C} + \text{O}_2 \longrightarrow 2\text{CO}_2$   
(ii)  $4\text{H}_2 + \text{O}_2 \longrightarrow 2\text{H}_2\text{O}$   
(iii)  $2\text{Mg} + \text{O}_2 \longrightarrow 2\text{MgO}_2$   
(iv)  $3\text{CuCO}_3 \longrightarrow 3\text{CuO} + \text{CO}_2$   
(v)  $\text{Mg} + \text{H}_2\text{Cl} \longrightarrow \text{MgCl}_2 + \text{H}_2$

3. Translate the following chemical reactions into equations, adding symbols to make them more informative:

- (i) Solid calcium oxide reacts with water to form a solution of calcium hydroxide  
(ii) Lead nitrate crystals when heated, form solid lead oxide along with the evolution of nitrogen dioxide and oxygen gases  
(iii) Zinc dust when mixed with dilute hydrochloric acid forms zinc chloride solution and hydrogen gas  
(iv) Barium chloride solution when treated with sodium sulphate solution forms a white precipitate of barium sulphate and sodium chloride solution

4. Replace '?' with the missing components/variables in the following reactions:



5. Which information is not conveyed by a balanced chemical equation?

- a) Physical states of reactants and products
- b) Symbols and formulae of all the substances involved in a particular reaction
- c) Number of atoms/molecules of the reactants and the products formed
- d) Whether a particular reaction is actually feasible or not



What are the values of x, y and z?

7. Which of the following reactions is not correctly balanced? Rewrite after balancing them:



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