

Science

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(Chapter - 1) (Chemical Reactions and Equations) (Practice Test 3 Answers)

(Class X)

Section - A

1. (b) Zinc granule.
2. (a) Checking temperature with a hand or thermometer.
3. (d) Magnesium, oxygen.
4. (a) Change in reactant state.

Section - B

5. Chemical reaction, a process in which one or more substances, the reactants, are converted to one or more different substances, the products. Substances are either chemical elements or compounds. A chemical reaction rearranges the constituent atoms of the reactants to create different substances as products.

6. Law of conservation of mass. It states **Matter can neither be created nor be destroyed**. The total mass of reactants must be equal to the total mass of products.

7. In a physical change, no new substance is formed. In a chemical change, new substance(s) with new properties is/are formed.

8. Chemical equation is balanced on the basis of law of conservation of mass.

9. The reaction will take place in the presence of sunlight. This reaction is used in black and white photography.

Section - C

10.

- a. $H_2(g) + Cl_2(g) \rightarrow 2HCl(g)$
- b. $Pb(s) + CuCl_2(aq) \rightarrow PbCl_2(s) + Cu(s)$
- c. $ZnO(s) + C(s) \rightarrow Zn(s) + CO(g)$

11.

- a. $3Fe(s) + 4H_2O(g) \rightarrow Fe_3O_4(s) + 4H_2(g)$
- b. $Mg(s) + 2HCl(dil) \rightarrow MgCl_2(aq)$
- c. $2Cu(s) + O_2(g) \rightarrow 2CuO(s)$

Section - D

12.

- a. Balanced chemical equation is an equation in which the number of atoms of various elements are equal on both sides of the equation.

The equation should be balanced due to law of conservation of mass.

- b. (i) $2P(s) + 5Cl_2(g) \rightarrow 2PCl_5(s)$
(ii) $CH_4(g) + O_2(g) \rightarrow CO_2(g) + 2H_2O(l)$
(iii) $C_6H_{12}O_6(s) + 6O_2(g) \rightarrow 6CO_2(g) + 6H_2O(l)$