

CHEMISTRY STUDY MATERIALS FOR CLASS 10

(NCERT Based notes of Chapter -01)

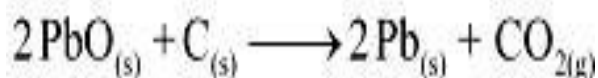
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DATE:- 18/04/2021

CHEMICAL REACTIONS AND EQUATIONS

EXERCISE QUESTIONS PAGE NO. 14, 15 and 16

Question 1: Which of the statements about the reaction below are incorrect?



- (a) Lead is getting reduced.
 - (b) Carbon dioxide is getting oxidised.
 - (c) Carbon is getting oxidised.
 - (d) Lead oxide is getting reduced.
- (i) (a) and (b)
 - (ii) (a) and (c)
 - (iii) (a), (b) and (c)
 - (iv) all

Answer : (i)(a) and (b)

Question 2:



The above reaction is an example of a

- (a) Combination reaction.
- (b) Double displacement reaction.
- (c) Decomposition reaction.
- (d) Displacement reaction.

Answer : (d) The given reaction is an example of a displacement reaction.

Question 3: What happens when dilute hydrochloric acid is added to iron filings? Tick the correct answer.

- (a) Hydrogen gas and iron chloride are produced.
- (b) Chlorine gas and iron hydroxide are produced.
- (c) No reaction takes place.
- (d) Iron salt and water are produced.

Answer : (a) Hydrogen gas and iron chloride are produced. The reaction is as follows:



Question 4: What is a balanced chemical equation? Why should chemical equations be balanced?

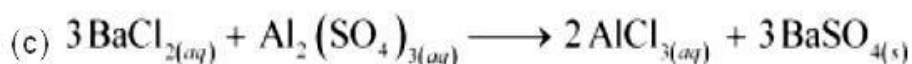
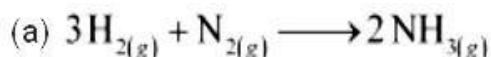
Answer : A reaction which has an equal number of atoms of all the elements on both sides of the chemical equation is called a balanced chemical equation.

The law of conservation of mass states that mass can neither be created nor destroyed. Hence, in a chemical reaction, the total mass of reactants should be equal to the total mass of the products. It means that the total number of atoms of each element should be equal on both sides of a chemical equation. Hence, it is for this reason that chemical equations should be balanced.

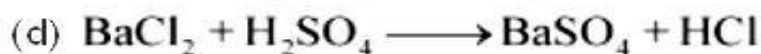
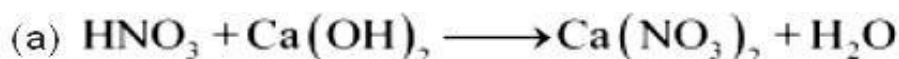
Question 5: Translate the following statements into chemical equations and then balance them.

- (a) Hydrogen gas combines with nitrogen to form ammonia.
- (b) Hydrogen sulphide gas burns in air to give water and sulphur dioxide.
- (c) Barium chloride reacts with aluminium sulphate to give aluminium chloride and a precipitate of barium sulphate.
- (d) Potassium metal reacts with water to give potassium hydroxide and hydrogen gas.

Answer :



Question 6: Balance the following chemical equations.



Answer :



Question 7: Write the balanced chemical equations for the following reactions.

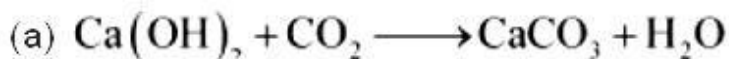
(a) **Calcium hydroxide + Carbon dioxide → Calcium carbonate + Water**

(b) **Zinc + Silver nitrate → Zinc nitrate + Silver**

(c) **Aluminium + Copper chloride → Aluminium chloride + Copper**

(d) **Barium chloride + Potassium sulphate → Barium sulphate + Potassium chloride**

Answer :



Question 8: Write the balanced chemical equation for the following and identify the type of reaction in each case.

- (a) **Potassium bromide (aq) + Barium iodide (aq) → Potassium iodide (aq) + Barium bromide(s)**
- (b) **Zinc carbonate (s) → Zinc oxide (s) + Carbon dioxide (g)**
- (c) **Hydrogen (g) + Chlorine (g) → Hydrogen chloride (g)**
- (d) **Magnesium (s) + Hydrochloric acid (aq) → Magnesium chloride (aq) + Hydrogen (g)**

Answer :

