

Chapter 5: Language of Chemistry

Worksheet 1

1. Write T for true and F for false statement.

- (i) The substances taking part in a chemical reaction are called reactants.
- (ii) Catalyst accelerates the rate of a chemical reaction.
- (iii) A precipitate can be indicated by using an upward arrow (\uparrow).
- (iv) The products are written on the right-hand side of a chemical equation.
- (v) The arrow sign (\rightarrow) is inserted between the reactants and products.

2. Fill in the blanks.

- (i) The new substance formed in a chemical reaction is called a _____ .
- (ii) Silver chloride breaks down to give silver and chlorine in the presence of _____ .
- (iii) _____ catalyst is used in the formation of NH_3 by reacting nitrogen with hydrogen.
- (iv) A chemical reaction can be represented in the form of a _____ .
- (v) In an _____ chemical equation, the number of atoms of the elements is not equal on both sides of the equation.

3. Match the columns.

Column A

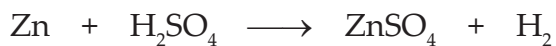
- (i) Absorption of energy
- (ii) Release of energy
- (iii) The colour of $\text{AgI}(s) \downarrow$
- (iv) The colour of $\text{BaSO}_4(s) \downarrow$
- (v) Indication of evolved gas

Column B

- (a) White
- (b) upward arrow
- (c) '+ Heat' is written on reactant side
- (d) '+ Heat' is written on product side
- (e) Yellow

4. Answer the following questions.

- (i) What is a chemical equation?
- (ii) In the following reaction, identify the products and reactants.



- (iii) What happens when magnesium burns in air?
- (iv) What information does a balanced chemical equation give to us?
- (v) What is an unbalanced chemical equation?

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Worksheet 2

1. Write T for true and F for false statement.

- (i) Magnesium does not react with cold water.
- (ii) A precipitate is an insoluble compound formed as a result of a chemical reaction.
- (iii) A chemical reaction is the symbolic representation of a chemical equation.
- (iv) Potassium reacts with oxygen to form potassium hydroxide.
- (v) The reaction $\text{N}_2 + 3\text{H}_2 \longrightarrow 2\text{NH}_3$ is a balanced chemical reaction.

2. Define the following.

- (i) Reactant
- (ii) Product
- (iii) Catalyst
- (iv) Balanced chemical equation
- (v) Chemical reaction

3. Fill in the blanks.

- (i) Magnesium reacts with hot water to produce _____ and _____.
- (ii) Water breaks down into its constituents on passing _____ through it.
- (iii) _____ catalyst is used in the formation of ammonia.
- (iv) Silver chloride breaks down in the presence of _____ to give silver and chlorine.
- (v) Atoms can neither be created nor destroyed, therefore, an unbalanced equation is not _____.

4. Answer the following questions.

- (i) What is meant by a chemical reaction?
- (ii) Name the conditions affecting the chemical reactions.
- (iii) State the characteristics of chemical reactions which make a chemical equation more informative.
- (iv) What is the advantage of representing a chemical reaction into chemical equation?