

## WORKSHEET

CLASS - 7

SUBJECT- Science

### CHAPTER- 3, Chemical substances and Processes

#### A. Fill in the blanks.

1. Iron is an \_\_\_\_\_ because it is made up of the \_\_\_\_\_ of the same kind.
2. Water is a \_\_\_\_\_, each molecule of it contains \_\_\_\_\_ of hydrogen and one atom of \_\_\_\_\_.
3. During a \_\_\_\_\_ change, the \_\_\_\_\_ state, shape, size or colour of the substance might change.
4. Burning of candle is an example of a \_\_\_\_\_ change.
5. Acid + \_\_\_\_\_ → \_\_\_\_\_ + water.

#### B. Write true or false.

1.  $\text{NaOH} + \text{H}_2\text{O} \longrightarrow \text{NaCl} + \text{HCl}$ . \_\_\_\_\_.
2. Mixtures are not pure substances. \_\_\_\_\_.
3.  $\text{Fe} + \text{CuSO}_4 \longrightarrow \text{FeSO}_4 + \text{Cu}$  is a displacement reaction. \_\_\_\_\_.
4. Products undergo a chemical change in a reaction. \_\_\_\_\_.
5. Nitrogen + Hydrogen \_\_\_\_\_ → ammonia. \_\_\_\_\_.

#### C. Match the following.

- |                          |                        |
|--------------------------|------------------------|
| 1. Limestone             | Decomposition reaction |
| 2. Breaking up of water. | Ions                   |
| 3. Curdling of milk.     | $\text{CaCO}_3$        |
| 4. Melting of candle     | Chemical change        |
| 5. Charged particles.    | Physical change        |

#### D. Answer the following briefly.

1. Explain chemical change with an example.
2. What is a chemical reaction? Give an example.
3. Are lemonade and soil mixtures? Explain.
4. Write the formula of Calcium carbonate with steps.
5. Give a chemical reaction to represent a Displacement reaction.

#### E. Answer the following.

1. Differentiate between
  - a. Combination and Decomposition reaction.
  - b. Physical and chemical changes
2. Explain neutralisation reaction with an example.
3. Give two differences between an element and a compound, using suitable examples.
4. Give chemical symbols of these elements

Potassium —, Iron—, Calcium—, Chlorine—, Silver—.

5. Give the symbol of these ions and write their charges

Name.                      Symbol with charge

Sulphate

Nitrate

Oxide

Chloride

Magnesium

Copper

**F. Pick the correct answer.**

1. Chemical substances are represented by
  - a. Formula
  - b. Symbols
  - c. Reaction
  - d. None
2. New substances are formed when two or more substances combine
  - a. Combination reaction
  - b. Decomposition reaction
  - c. Neutralisation reaction
  - d. None
3. Two or more substances mixed together in any ratio
  - a. Element
  - b. Compound
  - c. Products
  - d. Reactants
4. New substances formed after a chemical reaction
  - a. Products
  - b. Reactants
  - c. Mixture
  - d. None
5. Reaction in which more than one product is obtained
  - a. Displacement
  - b. Decomposition
  - c. Combination
  - d. None
6. Substances undergoing change in a chemical reaction
  - a. Products
  - b. Reactants
  - c. Mixtures
  - d. None
7. Charged particles making many substances are called
  - a. Ions
  - b. Atoms
  - c. Molecules
  - d. All of above

8. Acid reacts with a base in a
  - a. Combination reaction
  - b. Neutralisation reaction
  - c. Decomposition reaction
  - d. None
9. Chemical composition of the substance is given by
  - a. Chemical formula
  - b. Symbol
  - c. Element
  - d. All of these
10. Pure substances are
  - a. Elements
  - b. Compounds
  - c. a & b
  - d. Mixtures

**G. Make a list of Physical changes and Chemical changes( 10 each )  
happening around you in the household and immediate neighbourhood.**