

## INTRODUCTION TO TYPES OF CHEMICAL REACTIONS

We have learnt in Class IX that during a chemical reaction atom of one element do not change into those of another element. Nor do atoms disappear from the mixture or appear from elsewhere. Actually, chemical reactions involve the breaking and making of bonds between atoms to produce new substances. You will study about types of bonds formed between atoms in Chapters 3 and 4.

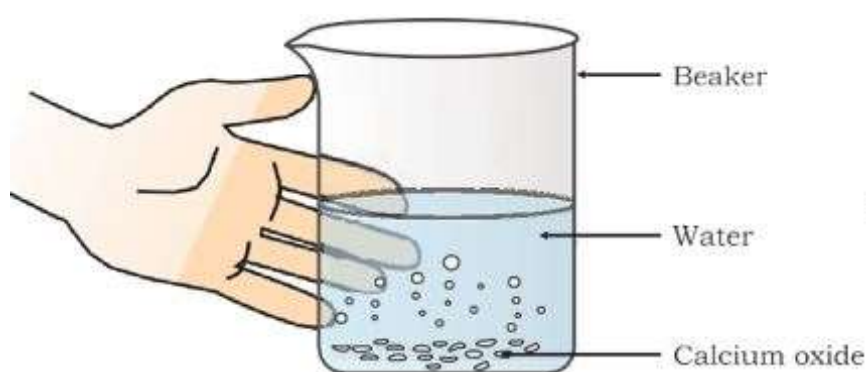
### Types of chemical reactions

There are 5 types of chemical equations. They are as follows:

- i. Combination reaction
- ii. Decomposition reaction
- iii. Displacement reaction
- iv. Double displacement reaction
- v. Oxidation

## COMBINATION REACTION

### Activity 1.4:

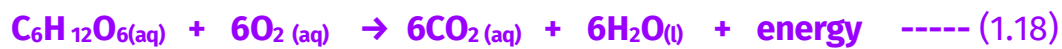


**Figure 1.3:** Formation of slaked lime by the reaction of calcium oxide with water

- \* Take a small amount of calcium oxide or quick lime in a beaker.
- \* Slowly add water to this.
- \* Touch the beaker as shown in Fig. 1.3.



carbohydrates are broken down to form glucose. This glucose combines with oxygen in the cells of our body and provides energy. The special name of this reaction is respiration, the process of which you will study in Chapter 6.



(Glucose)

iii. The decomposition of vegetable matter into compost is also an example of an exothermic reaction.

Identify the type of reaction taking place in Activity 1.1, where heat is given out along with the formation of a single product.

### More to know

A solution of slaked lime produced by reaction 1.13 is used for whitewashing walls. Calcium hydroxide reacts slowly with the carbon dioxide in the air to form a thin layer of calcium carbonate on the walls. Calcium carbonate is formed after two to three days of whitewashing and gives a shiny finish to the walls. It is interesting to note that the chemical formula for marble is also  $\text{CaCO}_3$ .



(Calcium hydroxide)

(Calcium carbonate)