

## FlexiPrep

### Examples of Chemical Change, Involving Organic Compounds, Involving Inorganic Compounds (For CBSE, ICSE, IAS, NET, NRA 2022)

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#### **Chemical Changes Involving Inorganic Compounds**

The reactions of compounds and elements that do not involve carbon atoms are the chemical changes involving inorganic compounds. Some examples of chemical change that involves inorganic compounds are mentioned below.

##### **Formation of Steel**

It is an irreversible process. Steel is formed by the addition of several other elements in definite quantities to iron, the basic element being carbon. This results in the formation of new substances thus considering it has a chemical change. Properties of the newly formed substances are different from that of iron.

##### **The Lighting of a Firework**

Firework consists of metal nitrates thus constituting to burning compounds. When firework is lit, combustion takes place leading to the formation of a new substance with the emission of light and heat. Thus, it can be considered as a chemical change.

##### **Photosynthesis**

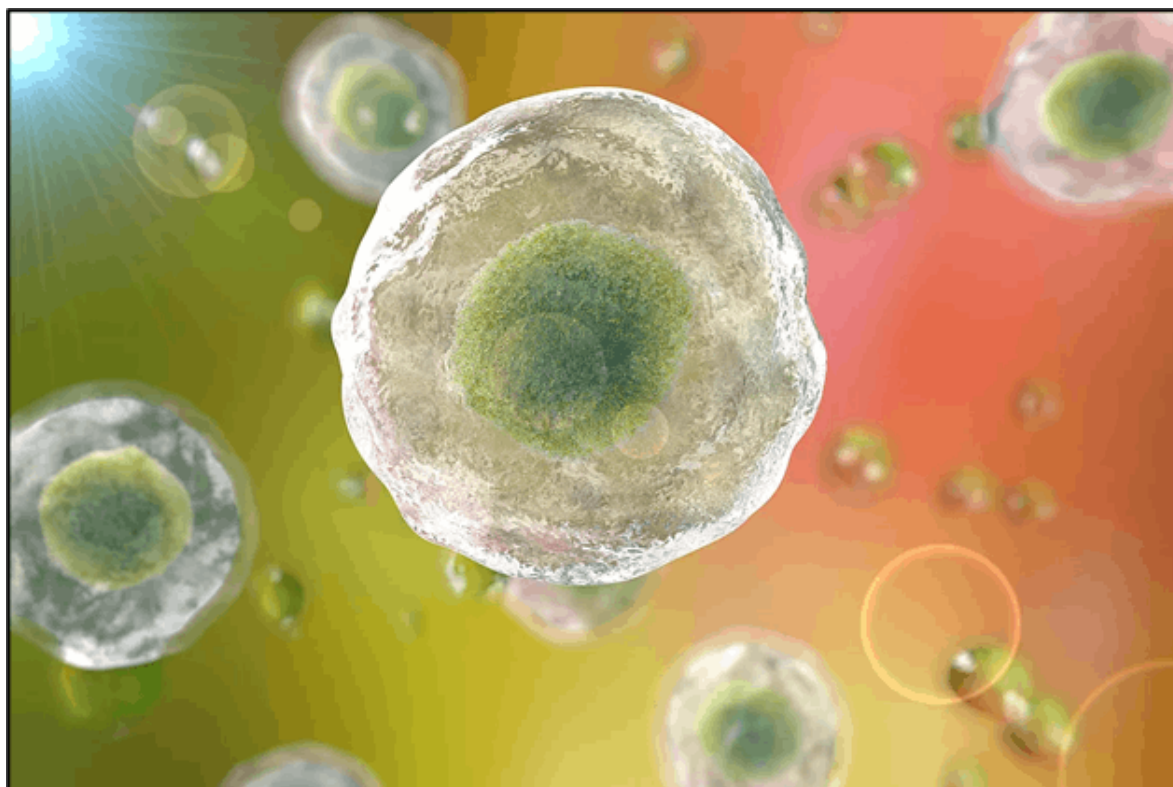


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Plants apply a chemical reaction called photosynthesis to convert carbon dioxide and water into food (glucose) and oxygen. It's one of the most common everyday chemical reactions and also one of the most important because this is how plants produce food for themselves and animals and convert carbon dioxide into oxygen. The equation for the reaction is:

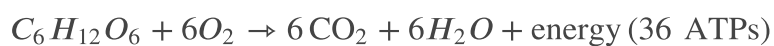


## Aerobic Cellular Respiration



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- Aerobic cellular respiration is the opposite process of photosynthesis in that energy molecules are combined with the oxygen we breathe to release the energy needed by our cells plus carbon dioxide and water. Energy used by cells is chemical energy in the form of ATP, or adenosine triphosphate.
- Here is the overall equation for aerobic cellular respiration:

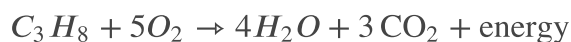


## Combustion



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- Every time you strike a match, burn a candle, build a fire, or light a grill, you see the combustion reaction. Combustion combines energetic molecules with oxygen to produce carbon dioxide and water.
- For example, the equation for the combustion reaction of propane, found in gas grills and some fireplaces, is:



## Biochemical Changes

It deals with the chemistry of the activity and the growth of living organisms. An example of biochemical changes is mentioned below.

### Photosynthesis

Photosynthesis is a process that is mainly used by plants to convert light energy into chemical energy. It is a chemical process that occurs in plants. In this process, plants convert water and carbon dioxide into sugars and oxygen.

### Solved Example

1. Milk turns sour due to
  - (a) Conversion of lactose in lactic acid
  - (b) Increased chemical changes

(c) Conversion of lactic acid into lactose

(d) Both A and B

**Ans:** (d)

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