

CHAPTER 11 : CHANGE IN SURROUNDING AND VARIOUS INCIDENTS**Instructions:**

- ✓ Read the chapter in your book - quickly and thoroughly, preferably more than once.
 - ✓ Watch the uploaded video class from school's website/YouTube channel. For becoming more clear about the basics, watch more than once, if needed.
 - ✓ Contact me in case of any difficulty in understanding.
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Cognitive Questions (Mark 1)**1. What is melting?**

Ans.: Transformation of a substance from solid state to liquid state by applying heat is called melting.

2. What is boiling?

Ans.: The process of quick transformation of a liquid into its gaseous state by applying heat is boiling.

3. What is physical change?

Ans.: The change of matter which leads the transformation in the state or shape but does not create a new substance and keeps the properties of that matter unchanged is called physical change.

4. What is chemical change?

Ans.: The change where one or more than one substance transforms completely into a new substance having different properties is called chemical change.

5. What is rust?

Ans.: Rust is a reddish or yellow-brown substance that is formed on some metals by the action of water and air and it causes decay of metals due to chemical change.

6. What is galvanizing?

Ans.: Galvanizing means giving a layer of zinc in an iron stuff. The layer of zinc protects iron from oxygen and water of the air. Thus rust cannot be formed. Iron does not decay as well. The metals can be protected by giving layer on tin instead of zinc.

7. What is electroplating?

Ans.: Electroplating is a process of making layer of metal in the surface of other through electrolysis. In this process nickel, chromium, tin, silver, and gold are generally used to make the layer. It is not only to prevent the erosion of metal but also to increase the attraction and shine.

Analytical Question (Mark-2)

1. What are the distinctions between physical change and chemical change?

Ans.: The distinctions between physical change and chemical change are as follows:

Physical change	Chemical change
i. No new substance is formed due to it.	i. One or more distinct substances can be formed due to this change.
ii. Physical property of the substances which take part in physical change never changes.	ii. Both physical and chemical properties of the substances which take part in chemical change must change.
iii. Example: Ice turns to water upon application of heat.	iii. Example: Rust in iron is chemical change. Here ferric oxide is formed from the reaction of iron, oxygen and water.

2. What is combustion? Explain with example.

Ans.: The process in which a substance reacting with oxygen of the air produces heat energy is called combustion.

Example: When candle is burnt it turns to carbon dioxide and water by reacting with oxygen and producing light and heat energy. This is combustion.

3. What types of change occurs while straw or gas is burnt in furnace? Physical or chemical change? Give reasons for your answer.

Ans.: Chemical change occurs while straw or gas is burnt in furnace.

Reasons: Here the gas or straw produces a huge amount of heat energy by conducting reaction with oxygen in air. Here straw or gas transforms completely into a new substance having different properties.

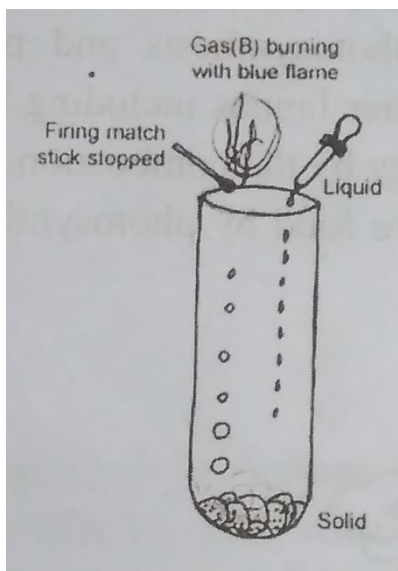
4. The shine of gold lasts long but that of copper does not - explain the reason.

Ans.: If copper is kept in air then rust is created because it reacts with oxygen and water of air. As a result it loses its shine. On the other hand, gold does not decay in the open air because it cannot create rust reacting with oxygen and water of the air. So the shine of gold lasts long.

Creative Questions

(Solve yourself)

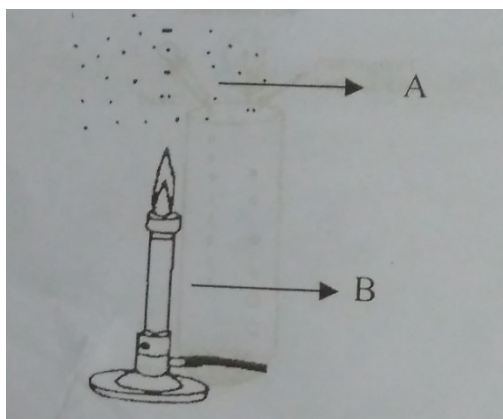
1.



a) Energy is produced with the chemical change occurring in the diagram - describe with verbose equation.

b) Both absorption and secretion occur in physical change - analyze according to the stimulus.

2.



- Explain the change of part marked 'B'.
- Give argument whether physical or chemical changes occurred in figure 'A'.