



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

- **Subject- Physical science** **Study Material - 5** **Class 7**
- **Date : 9.05.2020**
- **Chapter: Physical and chemical changes**

- Question

Why do stainless steel utensils not rust?

ANSWER:

Stainless steel utensils are alloys of iron. Alloys are the mixture of either two or more same metallic solid solution or different metallic solid solution. When a metal is alloyed with other metal, its resistance towards corrosion increases. Stainless steel is one such alloy; hence, it does not rust.

Question

Why do people paint the iron gates of their houses during the rainy season?

ANSWER:

During rainy season, the iron gates are directly exposed to the rain water and air, which causes rusting. Rusting is a continuous process that corrodes the metal and makes it less durable, and it occurs in the presence of air and water. Hence, the iron gates are coated with paint to prevent corrosion.

Question

Properties of physical and chemical changes are given below. Sort the properties of physical and chemical changes in the correct column.

1. New substances are formed.
2. Precipitation is an example of this.
3. Products have new composition.
4. Composition of substance remains same.
5. It is usually permanent.
6. It is usually temporary.
7. Burning of LPG is an example of this.

8. It is reversible.

Physical change	Chemical change
1.	5.
2.	6.
3.	7.
4.	8.

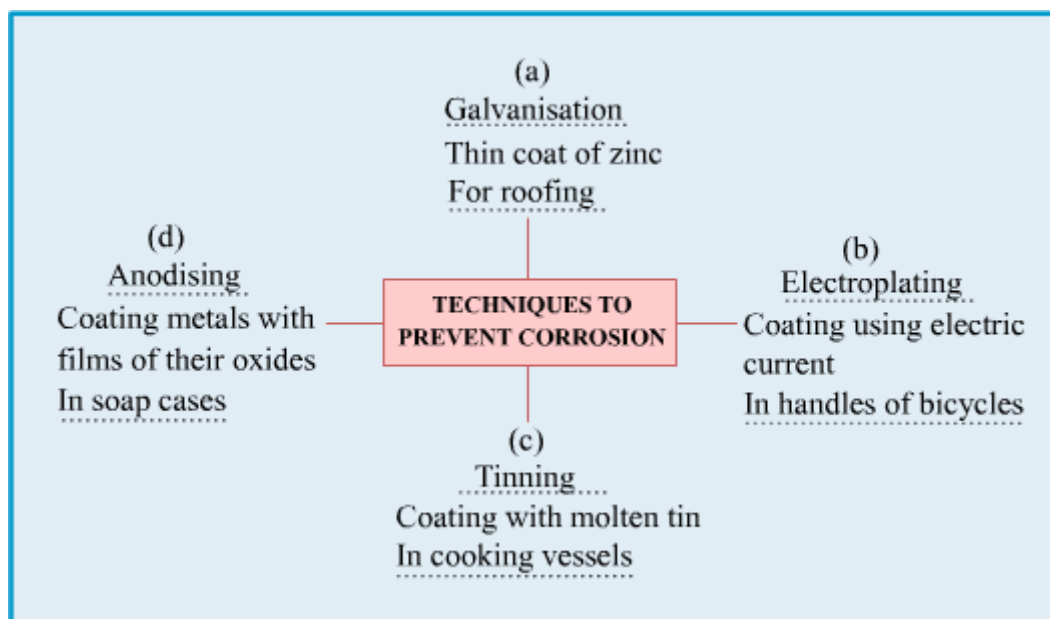
ANSWER:

Physical change	Chemical change
1. Precipitation is an example of this.	5. New substances are formed.
2. Composition of substance remains same.	6. Products have new composition.
3. It is usually temporary.	7. It is usually permanent.
4. It is reversible.	8. Burning of LPG is an example of this.

Question

Some techniques to prevent corrosion are mentioned in Box 2. Find the actual terms used for them and examples of each technique from the Box 1:

ANSWER:



(a) Galvanisation : Thin coat of zinc : Roofing

(b) Electroplating : Coating using electric current : Bicycle handles

- (c) Tinning : Coating with molten tin : Cooking vessels
(d) Anodising : Coating metals with films of their oxides : Soap cases
-

Question

Write any two features of a physical change.

ANSWER:

Following are the two features of a physical change:

- (i) No new substance is formed.
 - (ii) The change is not permanent and can be reversible.
-

Question

Write any two features of a chemical change.

ANSWER:

Following are the two features of a chemical change:

- (i) A new substance is formed and has different properties from the original substance.
 - (ii) Energy in the form of heat and light is either absorbed or released during the change.
-

Question

Growing of seed into a plant is which type of change?

ANSWER:

Growing of seed into a plant is a chemical change because the product (plant) formed is different from the original (seed). Further, the change of a seed into a plant is not reversible.

Question

Formation of compost is a chemical change. Explain how.

ANSWER:

During the formation of compost, the wastes are decomposed into nutrient-rich organic substances. The newly formed substance exhibits completely different properties from

the original substance. This process is irreversible because it cannot be converted back to the original substance by reversing the process. Hence, it is a chemical change.

Question

What do you understand by corrosion of metals?

ANSWER:

When metals are continuously exposed to air and moisture, their metal surfaces react with the oxygen and other gases present in the air and form their respective oxides (hydroxides and carbonates). This process is called corrosion of metals.

Question

Why do we give coating of tin metal on utensils made of brass?

ANSWER:

Brass utensils are coated with tin metal to prevent them from corrosion. This process is called tinning.

Explain how burning of a paper is different from tearing it.

ANSWER:

Tearing of paper does not result in the formation of any new substance. The resulting pieces of paper will have the same properties as that of the original paper. Hence, this is a physical change. Whereas when the paper is burnt, it liberates heat and light and forms ashes. These ashes exhibit different properties from that of the original paper. Also it is an irreversible process. The change is permanent; hence, it is a chemical change.

Teacher- Piyali Halder
