

ch-6

changes around us.

classmate

Date _____

Page _____

1. How is a metal rim fixed around a wooden wheel of a cart?

⇒ The metal rim is made slightly smaller than the wooden wheel. On heating, the rim expands and fits on the wheel. Cold water is then poured over the rim which contracts and fits tightly on to the wheel.

2. Distinguish between physical & chemical change.

<u>physical change</u>	<u>chemical change</u>
------------------------	------------------------

i) It is a temporary change and is easily reversible.

i) It is a permanent change that can't be reversed.

ii) NO, new substances are formed.

ii) New substances or products are formed.

iii) Energy of some kind may or may not be absorbed.

iii) Energy (generally heat or light) is either released or absorbed.

iv NO change in the Composition or properties of the substances take place.

e.g. → Moving of a fan, evaporation of water etc.

iv change in the composition or properties of the substances take place.

e.g. → Rusting of iron, digestion of food, burning of fuel etc.

3 Explain why physical change can be reversed but chemical change cannot?

⇒ physical changes are generally easy to reverse because no energy is produced by the substances.

chemical changes cannot be reversed because energy is produced by the substances forming a new substance.

4 Can physical and chemical changes take place together (simultaneously)? Explain, with an example.

⇒ Yes, physical and chemical changes take place together in case of burning of a candle.

• The wax under the wick gets heated and melts. The molten wax flows down and solidifies. The change in state from solid to liquid and again from liquid to solid are physical changes.

• When a candle burns, the oxygen in the air reacts and forms CO_2 gas. A new substance, the CO_2 is formed. Also water vapour (H_2O) is formed. So, it is a chemical change.

5 Write three different applications of expansion and contraction of materials.

⇒ i) fixing of a metal rim on a wooden wheel.

ii) The jammed metal lid of a jar can be opened by heating. The jar is inverted and just this lid is dipped into the hot water. After some time the lid can be opened.

iii) fixing wooden handles in the iron plate in the agricultural tools.

6 By burning of a piece of paper is irreversible?

⇒ When we burn a piece of paper, it changes into ash and smoke from

~~Process~~ the original piece of paper. So, it is an irreversible change.

7 Identify the reversible or irreversible changes that occur when the following happen —

⇒ i Freezing — Reversible.

ii Evaporation — Reversible.

iii Hatching egg — Irreversible

iv Ripening of fruits → Irreversible

v Making curd from milk → Irreversible

vi Boiling of an egg → Irreversible.

vii Melting of Butter → Reversible.

viii Tearing of paper → Irreversible

ix Burning of wood → Irreversible.

8 Amit dissolve a spoonful of salt in a glass of water. Can he obtain the salt? Explain.

⇒ Yes, Amit can get back the salt.

After mixing the salt with water it becomes saline water. He will take the water in a vessel and he will heat that solution. After few minutes the entire water should get evaporated and he will get the salt

crystals in the vessel.

9 Is melting of an ice a reversible or an irreversible change? Give reason.

⇒ Melting of an ice is a reversible change.

We know whenever the ice melts into water. Again from water we can get back to the ice by the process of freezing. So, here we can reverse the change.

N.C.E.R.T. Solutions

[Students will write both the questions and answers in their copy].

1 Yes, this change can be reversed by unfolding the folded dress.

This change can't be reversed because a broken toy can't be joined together. So, it is an irreversible change.

3 i NO, ii Yes, iii Yes, iv NO, v NO
vi ~~Yes~~ NO.

4 NO, we can't reverse this change because once a picture is drawn on a drawing sheet, we can't get fresh sheet, so, it is an irreversible change.

5 i changes that can be reversed:-

This changes are temporary changes that can be reversed and no new substances are to be formed.

Example:- Drying of wet clothes, melting of ice etc.

ii changes can't be reversed:-

This changes are permanent changes that can not be reversed and a new substance is formed.

Example:- Cooking of food, flowering of buds, etc.

6 NO, it is an irreversible change.