INDIAN SCHOOL AL WADI AL KABIR

CLASS: VII	**DEPARTMENT: SCIENCE-2025-26**	**DATE : 25/10/2025**
TEXTBOOK-QUESTIONS WITH ANSWERS	**TOPIC: CHANGES AROUND US: PHYSICAL AND CHEMICAL**	**NOTE: A4 FILE FORMAT**
CLASS & SECTION:	**NAME OF THE STUDENT:**	**ROLL NO.**

1. Which of the following statements are the characteristics of a physical change?
   (i) The state of the substance may or may not change.
   (ii) A substance with different properties is formed.
   (iii) No new substance is formed.
   (iv) The substance undergoes a chemical reaction.
   (a) (i) and (ii) (b) (ii) and (iii)
   (c) (i) and (iii) (d) (iii) and (iv)

Answer: (c) (i) and (iii)

2. Predict which of the following changes can be reversed and which cannot be reversed. If you are not sure, you may write that down. Why are you not sure about these?
(i) Stitching cloth to a shirt
(ii) Twisting of a straight string
(iii) Making idlis from a batter
(iv) Dissolving sugar in water
(v) Drawing water from a well
(vi) Ripening of fruits
(vii) Boiling water in an open pan
(viii) Rolling up a mat
(ix) Grinding wheat grains into flour
(x) Forming of soil from rocks

Answer:

Change	Reversible?	Reason
Stitching cloth to a shirt	**No**	**Cannot return to the original cloth pieces**
Twisting of a straight string	**Yes**	**Can untwist it**
Making idlis from batter	**No**	**New substance formed**
Dissolving sugar in water	**Yes**	**Can recover sugar by evaporation**
Drawing water from a well	**Yes**	**No change in the water's properties**
Ripening of fruits	**No**	**Chemical change**
Boiling water in an open pan	**No**	**The water vapour evaporated and gets dispersed in the surrounding, from where it cannot be reversed back to water**
Rolling up a mat	**Yes**	**Can unroll it**
Grinding wheat grains into flour	**No**	**Cannot get grains back from flour**
Formation of soil from rocks	**No**	**Slow natural process, irreversible**

3. State whether the following statements are True or False. In case a statement is False, write the correct statement.
   (i) Melting of wax is necessary for burning a candle. (True/False)
   (ii) Collecting water vapour by condensing involves a chemical change. (True/False)
   (iii) The process of converting leaves into compost is a chemical change. (True/False)
   (iv) Mixing baking soda with lemon juice is a chemical change. (True/False)

Answer:

(i) Melting of wax is necessary for burning a candle - **True**
(ii) Collecting water vapour by condensing involves a chemical change – **False.** It is a physical change.
(iii) The process of converting leaves into compost is a chemical change - **True**
(iv) Mixing baking soda with lemon juice is a chemical change - **True**

4. Fill in the blanks in the following statements:
(i) Nalini observed that the handle of her cycle has brown deposits. The brown deposits are due to _____, and this is a _____ change.
(ii) Folding a handkerchief is a _____ change and can be _____.

(iii) A chemical process in which a substance reacts with oxygen with evolution of heat is called _____, and this is a _____ change.
(iv) Magnesium, when burnt in air, produces a substance called _____. The substance formed is _____ in nature. Burning of magnesium is a _____ change.

Answer:

(i) Nalini observed that the handle of her cycle has brown deposits. The brown deposits are due to **rusting**, and this is a **chemical** change.
(ii) Folding a handkerchief is a **physical** change and can be **reversed.**
(iii) A chemical process in which a substance reacts with oxygen with the evolution of heat is called **combustion**, and this is a **chemical** change.
(iv) Magnesium, when burnt in air, produces a substance called **magnesium oxide**. The substance formed is **basic** in nature. The burning of magnesium is a **chemical** change.

5. Are the changes of water to ice and water to steam physical or chemical? Explain.

Answer: Physical change.
Explanation: No new substance is formed; only the state of matter changes.

6. Is curdling of milk a physical or chemical change? Justify your statement.

Answer: Chemical change.
Explanation: A new substance (curd) is formed with different properties.

7. Natural factors, such as wind, rain, etc., help in the formation of soil from rocks. Is this change physical or chemical, and why?

Answer: Both physical and chemical.
Explanation: Physical weathering breaks rocks; chemical weathering alters composition.

8. Read the story titled ‘Eco-friendly Prithvi’ and tick the most appropriate option(s). Provide a suitable title of your choice for the story.

Prithvi is preparing a meal in the kitchen. He chops vegetables, peels potatoes, and cuts fruits (physical changes/chemical changes). He collects the seeds, fruits, and vegetable peels into a clay pot (physical change/chemical change). The fruits, vegetable peels, and other materials begin to decompose due to the action of bacteria and fungi, forming compost (physical change/chemical change). He decides to plant seeds in the compost and water them regularly. After a few days, he notices that the seeds begin to germinate and small plants start to grow, eventually blooming into colourful flowers (physical change/chemical change). His efforts are appreciated by all his family members.

Answer:

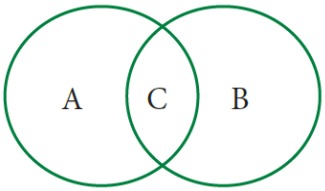
Suggested Title: "From Waste to Wonder"

Change	Type
Chopping vegetables	Physical
Collecting peels	Physical
Decomposition into compost	Chemical
Germination and blooming	Chemical

9.

Some changes are given here. Write physical changes in the area marked 'A' and chemical changes in the area marked 'B'. Enter the changes which are both physical and chemical in the area marked 'C'.

Process of burning a candle; Tearing of paper; Rusting; Curdling of milk; Ripening of fruits; Melting of ice; Folding of clothes; Burning of magnesium and Mixing baking soda with vinegar.



Answer:

(i) A (Physical Changes): Tearing of paper, Melting of ice, Folding of clothes
(ii) B (Chemical Changes): Rusting, Curdling of milk, Ripening of fruits, Burning of magnesium, Mixing baking soda with vinegar
(iii) C (Both Physical and Chemical): Burning a candle

10. The experiments shown in Fig. 5.11 (a–d) were performed. Find out in which case(s) lime water turns milky and why?

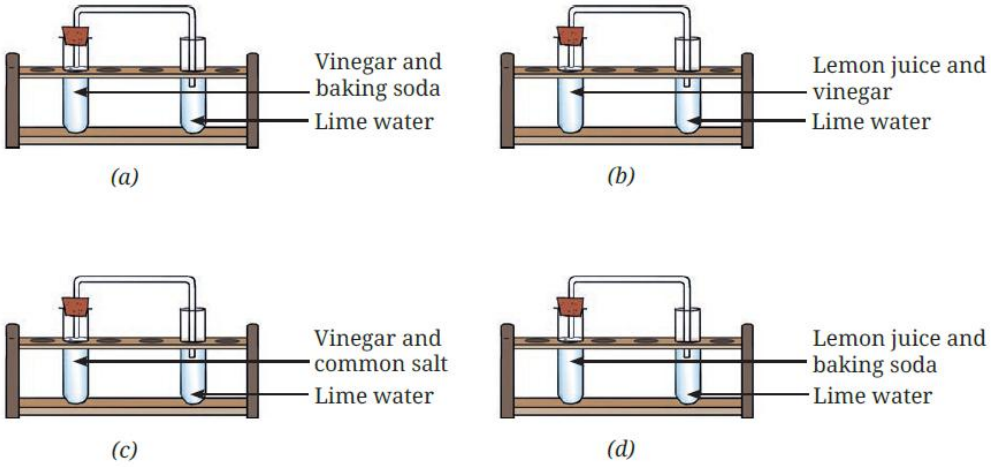


Fig. 5.11

Answer:

(a) Vinegar and baking soda → Lime water: Yes

(b) Lemon juice and vinegar → Lime water: No

(c) Vinegar and common salt → Lime water: No

(d) Lemon juice and baking soda → Lime water: Yes

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