

CHEMISTRY

BOOKS - ICSE

PHYSICAL AND CHEMICAL CHANGES

Check Your Progress Write True Or False Correct
The False Statements

1. Give reason: Stretching a rubber band is a physical change.



2. The ripening of fruits is a physical change.



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3. Energy is either absorbed or evolved during a chemical change.



4. Boiling (vaporization) refers to the change of a liquid into its solid state at its boiling point.



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5. The total mass of the substances involved in a chemical change remains constant.



1. Which of the following is/are characteristic(s) of a physical change?

A. temporary change

B. reversible

C. formation of no new substance

D. all of the above

Answer:



2. Which of the following is not a chemical change?

A. rusting of iron

B. cooking of food

C. digestion of food

D. freezing of water

Answer:



3. Which of the following is a chemical change?

A. burning of magnesium ribbon in air

B. freezing of water

C. evaporation of water

D. tearing of paper

Answer:



4. Which	າ of the	following	refers	to t	he ch	ange
of state	from so	olid to liqu	id?			

- A. boiling
- B. freezing
- C. melting
- D. evaporation

Answer:



5.	Which	form	of	energy	is	absorbed	in
photosynthesis?							

- A. heat
- B. sound
- C. electrical
- D. light

Answer:



Exercise Fill In The Blanks

1. A ____ change is temporary and reversible



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2. In a chemical change, the original substance loses its own ____ and properties.



3. A _____ change is generally associated with the evolution or absorption of energy.



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4. When a chemical change takes place with the evolution of heat energy, the change is said to be



5. Water while freezing releases ____ energy.



Exercise Write True Or False Correct The False Statements

1. In a physical change, the chemical composition of the original substance is altered.



2. True or False: The melting of wax is a physical change.



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3. True or False: All changes of state are physical changes.



4. Condensation refers to the change of state from liquid to gas on cooling.



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5. True or False: A chemical change is permanent and irreversible.



6. State whether the given statement is true or false? Mass is created during a chemical change.



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Exercise Match The Columns

1. Classify the following changes into physical and chemical changes.

- 1. Melting of wax
- 3. Digestion of food
- 5. Sublimation of iodine
- 7. Stretching a rubber band

- 2. Magnetization of iron
- 4. Burning of a candle
- 6. Rusting of iron
- 8. Burning of a piece of magnesium ribbon



Exercise Answer The Following In Short

1. What is a physical change?



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2. What is a chemical change ? Give two examples of chemical change.



3. What is an endothermic change?



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4. What is an exothermic change?



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5. What happens to the intermolecular force of attraction between the molecules in a

change of state from solid to liquid?



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6. What happens to the intermolecular space between the molecules in a change of state from liquid to solid?



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Exercise Answer The Following In Detail

1. Write the characteristics of physical changes.



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2. Write the characteristics of chemical changes.



3. Give the main differences between physical changes and chemical changes.



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4. Explain the change of heat energy in a physical change.



5. Explain energy changes in a chemical change.



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Think And Answer

1. Sublimation of camphor is a physical change. Explain.



2. The burning of paper is a chemical change. Why?



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3. True or False: The melting of wax is a physical change.



4. The burning of a piece of magnesium ribbon in air is a chemical change. Explain.



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Test Yourself 1 True Or False

1. Growth of a plant is a slow process



2. Inflating a ballon is an irreversible change



3. Ripening of fruits is a chemical change



4. Occurrence of an earthquake is a periodic change.



5. Water freezing into into ice is a physical change.



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Test Yourself 2 Match The Following

1. Match the following

- 1. Iron is exposed to moist air
- 2. Lemon juice is added to milk
- 3. Ice is kept at room temperature
- 4. Camphor is heated

- Curdling
 - b. Sublimation
 - c. Rusting
 - d. Melting



Exercise A Multiple Choice Question

- 1. Rusting of iron is a
 - A. Physical change
 - B. periodic change
 - C. chemical change
 - D. fast change

Answer: C

2. Periodic changes are the ones which take place

A. very slowly

B. very fast

C. suddenly

D. after fixed interval of time

Answer: D



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- 3. Melting of ice into water is a
 - A. chemical change
 - B. physical change
 - C. irreversible change
 - D. periodic change

Answer: B



4. On heating, camphor changes into vapour form. It is a following type a change.

A. temporary and irreversible

B. temporary and chemical

C. physical and reversible

D. chemical and reversible

Answer: C



5. Which of the following is a chemical change

?

A. curdling of milk

B. evaporation of water

C. melting of ice cream

D. deflating ballon

Answer: A



1. Iron and rust have the same properties



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2. Sublimation is a chemical change



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3. True or False: A chemical change is permanent and irreversible.



4. Tornado can be called a periodic change.



5. Growth of a seeding into a plant is a physical change.



1. Changes in which new substances are formed are called Changes.



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2. Rusting of iron is a Change while freezing of water is a Change.

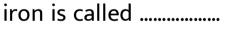


3. Temporary and reverisble changes are called Changes



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4. The reddish brown substance formed on iron is called





5. Sublimation is	a change in a substance from
state to	State



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Exercise D Match The Following

1. Match the following

- 1. When vinegar is added to milk
- 2. Phases of moon
- 3. Formation of iron oxide on iron objects
- Solid state of a substance changing directly to gaseous state
- (a) Periodic change
- (b) Chemical change
- (c) Sublimation
- (d) Rusting



Exercise E Name The Following

1. Changing of solid ice into water.



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2. Changing of camphor directly from solid into vapour form.



3. A change that occurs after a fixed interval of time.



4. A change which is irreversible and leads to formation of new substances.



5. Change in milk on adding lemon juice.

Exercise F Diagram Based Questions

1. Name the process involved in figures (a), (b) and (c).





2. Which of the following changes are the chemical changes?





Exercise G Differentiate Between The Following

1. Differentiate between

Slow and fast changes



2. Differentiate between

Reversible and irreversible changes



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3. Differentiate between

Periodic and non-periodic changes



4. Differentiate between

Natural and man-made changes



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5. Differentiate between

Physical and chemical changes



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Exercise H Short Answer Questions

1. Why is melting of ice called a physical change?



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2. Is rusting of iron a reversible change?



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3. Give two features of a physical change.



4. What type of changes are called periodic changes?



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5. Define sublimation.



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6. If milk changes into curd, is it a chemical, reversible or a fast change?



7. Why is rotting of eggs considered a chemical change?



8. Why is sublimation considered a physical change and not a chemical change?



9. What will happen to milk if little bit of lemon juice is added to it?



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10. Give one example each of a slow change and a fast change.

