

Changes Around Us

I. Choose the Correct Answer

Question 1.

When ice melts to form water, change occurs in its

- (a) position
- (b) colour
- (c) state
- (d) composition

Answer:

- (c) State

Question 2.

Drying of wet clothes in air is an example of

- (a) Chemical change
- (b) Undesirable change
- (c) irreversible change
- (d) physical change

Answer:

- (d) Physical change

Question 3.

Drying of wet clothes in air Is an example of

- (a) Chemical change
- (b) Undesirable change
- (c) irreversible change
- (d) physical change

Answer:

- (d) physical change

Question 4.

Out of the following an example of a desirable change is

- (a) rusting
- (b) change of seasons
- (c) earthquake
- (d) flooding

Answer:

(b) change of seasons

Question 5.

Air pollution leading to Acid rain is a

- (a) reversible change
- (b) fast change
- (c) natural change
- (d) human made change

Answer:

(d) human made change

II. Fill in the blanks

1. Magnet attracts iron needle. This is change, (a reversible / an irreversible)
2. Boiling of egg results in change, (a reversible / an irreversible)
3. Changes that are harmful to us are (desirable / undesirable)
4. Plants convert Carbon-di-oxide and water into starch. This is an example of change, (natural / human made)
5. Bursting of fire crackers is a change whereas germination of seeds is a change, (slow / fast)

Answer:

1. a reversible
2. an irreversible
3. undesirable
4. Natural
5. fast; slow

III. True or False. If False, give the correct statement

1. Growing of teeth in an infant is slow change.
2. Burning of match stick is a reversible change.
3. Change of New moon to Full moon is human made.
4. Digestion of food is a physical change.
5. In a solution of salt in water, water is the solute.

Answer:

1. True

2. False – It is an irreversible change
3. False – It is a Natural change
4. False – It is a Chemical change
5. False – Water is the solvent

IV. Analogy

Question 1.

Curdling of milk: irreversible change ::
Formation of clouds: change

Answer:

reversible

Question 2.

Photosynthesis:change ::
burning of coal: Human – made change

Answer:

Natural

Question 3.

Dissolving of glucose: reversible change ::
Digestion of food: change

Answer:

Irreversible

Question 4.

Cooking of food: desirable change ::
decaying of food: change

Answer:

undesirable

Question 5.

Burning of matchstick: change ::
Rotation of the Earth: Slow change

Answer:

Fast

V. Circle the odd one out. Give reason for your choice

Question 1.

Growth of a child, Blinking of eye, Rusting, Germination of a seed.

Answer:

Blinking of eye (a fast change)

Question 2.

Glowing of a bulb, lighting of a Candle, breaking of a coffee mug, curdling of milk.

Answer:

Curdling of milk (a chemical change)

Question 3.

Rotting of an egg, condensation of water vapour, trimming of hair, Ripening of fruit.

Answer:

Trimming of hair (Man-made change)

Question 4.

Inflating a balloon, popping a balloon, fading of wall paint, burning of kerosene

Answer:

Burning of Kerosene (Chemical change)

VI. Give a very short answer

Question 1.

What kind of change is associated with the decaying of plants?

Answer:

Decaying of plants is associated with slow change and chemical change.

Question 2.

You are given some candle wax. Can you make a candle doll from it? What kind of change is this?

Answer:

Yes, I can make a doll from the candle. The kind of change is a physical change.

Question 3.

Define a slow change.

Answer:

Changes which take place over a long period of time (hours/days/months/years) are known as slow changes.

Question 4.

What happens when cane sugar is strongly heated? Mention any two changes in it.

Answer:

When Cane sugar is strongly heated, it will initially melt and after that start to decompose. It will turn brown and then black and give off fumes.

The changes involved are:

1. Physical change
2. irreversible change

Question 5.

What is the solution?

Answer:

When a solute is dissolved in a solvent, it forms a solution.

Solute + solvent → solution.

VII. Give a short answer

Question 1.

What happens when the paper is burnt? Explain.

Answer:

When the paper is burnt, oxygen from the air combines with carbon in the paper turning into carbon dioxide and water vapor which float away, leaving solid ash. The action of burning paper can't be reversed. So, it is an irreversible change. Also, it is a Chemical change and a Fast change.

Question 2.

Can deforestation be considered a desirable change? Explain.

Answer:

1. Deforestation cannot be considered a desirable change.
2. Because it is harmful to our environment and not desired by us are known as Undesirable changes.

Question 3.

What type of changes is associated with the germination of a seed? Explain.

Answer:

1. Germination of seed is a slow change.
2. Changes which take place over a long period of time (days) are known as Slow changes.

VIII. Answer in detail

Question 1.

Give one example in each case that happens around you.

- (a) Slow and fast change
- (b) Reversible and irreversible change
- (c) Physical and chemical change
- (d) Natural and man-made change
- (e) Desirable and undesirable change

Answer:

a.	Slow change Germination of seed	Fast change Bursting of fire crackers
b.	Reversible change Melting of ice	Irreversible change Milk into curd
c.	Physical change Sublimation	Chemical change Rusting of iron
d.	Natural change Rain	Man-made change Deforestation
e.	Desirable change Ripening of fruit	Undesirable change Decaying of fruit

IX. Questions Based on Higher Order Thinking Skills (HOTS)

Question 1.

When a candle is lit the following changes are observed.

Answer:

1. Wax melts.
2. Candle keeps burning.
3. The size of the candle decreases.
4. The molten wax solidifies

Question 2.

Which of the changes can be reversed? Justify your answer.

Answer:

When the candle is burning, the heat of the flame melts the solid wax to liquid wax. This signifies reversible (or) Physical changes. Also, as the wax melts, the size of candle decreases. If then molten wax solidifies and takes a different shape.

I. Choose the appropriate answer**Question 1.**

Water changes into ice on cooling are called as

- (a) Melting
- (b) Vaporisation
- (c) Condensation
- (d) Freezing

Answer:

- (d) freezing

Question 2.

_____ is the process in which something becomes different from what it was earlier.

- (a) Classification
- (b) Composition
- (c) Position
- (d) Change

Answer:

- (d) Change

Question 3.

Evaporation of water from lakes and river

- (a) Slow change
- (b) Fast change
- (c) Natural change
- (d) Both (a) and (b)

Answer:

- (d) Both (a) and (b)

Question 4.

_____ change is a temporary change

- (a) Physical
- (b) Chemical
- (c) Undesirable
- (d) slow

Answer:

- (a) Physical

Question 5.

The blackening of the Silver anklet is a (an)

- (a) Irreversible change
- (b) Temporary change
- (c) Short term change
- (d) Periodical change

Answer:

- (a) Irreversible change

II. Fill in the blanks

1. A change in which a new substance is formed is called
2. Formation of coal is a
3. An example of natural as well as an undesirable change is
4. is the Universal Solvent.
5. Eco-friendly changes are

Answer:

1. Chemical Change
2. Slow Change
3. Earthquake
4. Water
5. Desirable changes

III. Match the following

i)	Temporary change	a)	Desirable change
ii)	Hatching of eggs	b)	Chemical change
iii)	Permanent change	c)	Artificial change
iv)	Cultivation	d)	Physical change

Answer:

i. – d

ii. – a

iii. – b

iv. – c

IV. Analogy

Question 1.

Rusting of Iron: undesirable change: :Dead plants turn into manure :

Answer:

Desirable change

Question 2.

Touch me not plant:: :digestion of food : Irreversible change

Answer:

Reversible change

Question 3.

Change of seasons: slow change: :Breaking of glass :

Answer:

fast change

Question 4.

Earth quake: undesirable change: :Heartbeat:

Answer:

desirable change

Question 5.

Silver articles turning black:: :Boiling of H₂O : physical change

Answer:

Chemical change

V. Very short answer

Question 1.

What is the change?

Answer:

Change is the observable difference between the initial state and the final state of any substance.

Question 2.

What is a reversible change?

Answer:

Changes which can be reversed (to get back to the original state) are known as reversible changes.

Question 3.

What is melting? Give example.

Answer:

The conversion of a solid into a liquid by heating is called melting. Ex.: Ice into water.

Question 4.

Water is the universal solvent. Why?

Answer:

Water is known as the universal solvent. It dissolves a wide range of substances.

VI. Long answer**Question 1.**

Distinguish between the physical and chemical changes.

Answer:

Physical change		Chemical change
1.	No new substance formed	New substance formed
2.	No change in the chemical composition	Change in the chemical composition
3.	Temporary change	Permanent change
4.	Reversible	Irreversible
5.	Ex. Melting of ice	Ex. Burning of wood

Question 2.

Tabulate some changes taking place in our body system with its type.

Answer:

Change		Examples
1.	Slow	Growth of Nail / hair
2.	Fast	Eyes blinking
3.	Physical	Ageing (in skin)
4.	Chemical	Respiration
5.	Reversible	Taking Anaesthetics
6.	Irreversible	Digestion
7.	Desirable	Heart beat
8.	Undesirable	Catching cold
9.	Natural	Body growth
10.	Man made	Hair cutting