

Unit 3 - Changes Around Us

Class: VI

Subject: Science

I. Choose the appropriate answer

- When ice melts to form water, change occurs in its
a. position b. colour **c. physical state** d. composition
- Drying of wet clothes in air is an example of
a. Chemical change b. Undesirable change
c. irreversible change d. physical change
- Formation of curd from milk is
a. a reversible change b. a fast change
c. an irreversible change d. an undesirable change
- Out of the following an example of a desirable change is
a. rusting **b. change of seasons** c. earthquake d. flooding
- Air pollution leading to acid rain is a
a. reversible change b. fast change
c. natural change **d. human made change**

II. Fill in the blanks

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

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

- Growing of teeth in an infant is slow change. **True**
- Burning of match stick is a reversible change. **False**

3. Change of new moon to full moon is human made. **False**
4. Digestion of food is a physical change. **False**
5. In a solution of salt in water, water is the solute **False**

IV. Analogy

1. Curdling of milk : irreversible change :: Formation of clouds : reversible change
2. Photosynthesis : natural change :: burning of coal : Human - made Change
3. Dissolution of glucose : reversible change :: Digestion of food: irreversible change
4. Cooking of food : desirable change :: decaying of food : undesirable. change
5. Burning of matchstick : fast change: Rotation of the Earth : Slow change

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

1. Growth of a child, Blinking of eye, Rusting, Germination of a seed
2. Glowing of a bulb, lighting of a Candle, breaking of a coffee mug, curdling of milk
3. Rotting of an egg, condensation of water vapour, trimming of hair, Ripening of fruit
4. Inflating a balloon, popping a balloon, fading of wall paint, burning of kerosene

VI. Give very short answer

1. What kind of a change is associated with decaying of a plants?

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

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

Yes, I can. It is a physical (reversible) change.

3. Define a slow change.

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

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

1. Sugar is basically Sucrose.
2. The molecular formula of Sugar is $C_{12}H_{22}O_{11}$ (or) $C_{12}(H_2O)_{11}$.
3. When sugar is heated, it loses all water molecules and decomposes to carbon.
4. Chemical change;
5. Irreversible change

5. What is a solution?

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

Solute + solvent \rightarrow solution.

VII. Give short answer

1. What happens when paper is burnt? Explain.

Changes take place within a short period of time (seconds or minutes) So, it is a fast change.

2. Can deforestation be considered a desirable change? Explain.

No, it is an undesirable change, and it is a human made change. Deforestation leads to decreasing rainfall, and leads to global warming.

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

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

VIII. Answer in detail

1. Give one example for each case that happens around you.

a. Slow and fast change

Slow Change: Examples: growth of nail and hair, change of seasons, germination of seed.

Fast Change: Examples: Bursting of balloon, breaking of glass, bursting of fire crackers, burning of paper.

b. Reversible and irreversible change

Reversible change: Examples: Touch me not plant (Responding to touch), stretching of rubber band, melting of ice.

Irreversible change: Examples : Change of milk into curd, digestion of food, making idly from batter

c. Physical and chemical change

Physical changes: Example: Melting of ice, the solution of salt or sugar, stretching of rubber band.

Chemical changes: Examples: Burning of wood, Popping of popcorn, Blackening of silver ornaments, and Rusting of iron.

d. Natural and man-made change

Natural changes: Examples: Rotation of the earth, Changing phases of the Moon, Rain.

Human made or artificial changes: Examples: Cooking, Deforestation, Cultivating crops, construction of buildings

e. Desirable and undesirable change

Desirable changes: Examples: Ripening of fruit, growth of plants, cooking of food, milk changing to curd.

Undesirable changes: Examples: Deforestation, decaying of fruit, rusting of iron.

IX. Question based on Higher Order Thinking Skills

1. When a candle is lit the following changes are observed.

a. Wax melts.

- b. Candle keeps burning.
- c. The size of the candle decreases.
- d. The molten wax solidifies
- e. Which of the changes can be reversed? Justify your answer.
 - a. Wax melting is a reversible change.
 - d. "The molten wax solidifies" is a reversible change.

These two changes can be reversible to get back the original state. So the above two changes are reversible changes.

