**CHANGES AROUND US—by MUKUT BOSE**

##### **Q1. Write two examples of slow changes.**

Ans. Germination of seed and ripening of fruits

##### **Q2. Write two examples of fast changes.**

Ans. Bursting of crackers and Burning of paper

##### **Q3. Is it possible to obtain wood from sawdust?**

Ans. No, because it is an irreversible change.

##### **Q4. Does the shape of the eraser changes when it is used repetitively?**

Ans. Yes, the shape of the eraser changes when it is used repetitively.

##### **Q5. Think of some changes that happen in our body.**

Ans. Growth of nails, growth of hair, increase in height, increase in weight etc.

##### **Q6. A small size boat is made by folding a paper. Can this change be reversed? Think and write one more example of similar type.**

Ans. Yes, it can be reversed. Another example is ball made by folding paper.

##### **Q7. Your brother accidently dropped your favorite pencil box and broke it. This is a change you did not want. Can you reverse this change?**

Ans. No, this change is not reversible as broken pieces cannot be fixed.

##### **Q8. How candles of different shape are made?**

Ans. Molten wax is poured in desired mold and a wick is placed in it. Then it is cooled. This is how we get candles of different shape.

##### **Q9. What is reversible change?**

Ans. The changes in which we can bring back the products to original form without creating any new substance are known as reversible changes.

##### **Q10. Is cutting down of a tree is reversible change?**

Ans. No, cutting down of tree cannot be consider as a reversible change because same tree can be planted again after cutting.

##### **Q11. Is printing of book is a reversible or an irreversible change?**

Ans. Printing is an irreversible change because ink and paper cannot be separated once printing is done.

##### **Q12. Write two examples each of reversible and irreversible changes.**

Ans. Reversible Change – melting of ice and stretching of rubber band

Irreversible change – Burning of leaves and Souring of milk

##### **Q13. You made a picture on a blank sheet and colored it. Can you reverse this change? If not, why?**

Ans. No, this change cannot be reversed as we cannot get fresh blank sheet once a picture is drawn and colored.

##### **Q14. Explosion of a cracker is an irreversible change. How?**

Ans. Explosion of a cracker is an irreversible change because once crackers are burnt, they cannot be converted back to its original form.

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##### **Q15. A bag of cement lying outside in the open got wet due to heavy rain. Can we reverse the change occurred to the cement by placing it under the sun?**

Ans. No, the change cannot be reversed as it is an irreversible change.

##### **Q16. How iron articles of different shapes and sizes are made?**

Ans. A piece of iron is heated till it becomes red and hot and then it becomes soft and is beaten into desired shape and size.

##### **Q17. How setting of curd an irreversible change?**

Ans. Setting of curd is an irreversible change because new substance (curd) formed cannot be converted back into milk again.

##### **Q18. Is burning of incense stick an irreversible change?**

Ans. Burning of incense stick is an irreversible change because when incense stick are burnt, new substances are produced in the form of ash and smoke which cannot be converted back into incense stick again.

##### **Q20. Why a candle reduces in size on burning? What kind of change it is?**

Ans. A candle reduces in size on burning because wax near the wick melts into a liquid and changes into ash and fumes. It is an irreversible change as new substance formed cannot be converted back to candle again.

##### **Q21. Why is metal rim heated before fixing on to wooden cart wheel?**

Ans. Metals expand on heating and contract on cooling. Iron rims are made slightly smaller than the wheels. Rim is heated so that it expands and lies easily on the wheels. The same rim, on cooling contracts and get firmly fixed on the wheels.

##### **Q22. Differentiate between slow and fast change.**

Ans.

|  |  |
| --- | --- |
| **Slow Change** | **Fast Change** |
| 1. The changes that take place in long period of time are called Slow change. | 1. The changes that take place in short period of time are called Fast change. |
| 2. Examples: germination of seed, curdling of milk, mountain formation, rusting of iron etc. | 2. Examples: burning of paper, burning of candle, thunderstorm, bursting of crackers etc.  |

##### **Q23. What kind of change is the formation of clouds?**

Ans. Formation of clouds is a physical change because water evaporates by the process of evaporation and goes into air and form clouds by the process of condensation. This water again comes back to the earth by precipitation. This process is repeated again and again.

##### **Q24. How is frying a puri different from rolling a puri?**

Ans.

|  |  |
| --- | --- |
| **Frying a puri** | **Rolling a puri** |
| 1. It is an Irreversible change. | 1. It is reversible change. |
| 2. Taste and color will change. | 2. Shape and size will change. |

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##### **Q25. Write reversible or irreversible for each of the following change:**

Ans.

|  |  |  |
| --- | --- | --- |
| S.No. | Change | Type of Change |
| 1 | Cutting of a piece of wood | Irreversible |
| 2 | Melting of ice cube | Reversible |
| 3 | Dissolving salt in water | Reversible |
| 4 | Cooking of Dal | Irreversible |
| 5 | Ripening of fruit | Irreversible |
| 6 | Souring of milk | Irreversible |
| 7 | Boiling of water | Reversible |
| 8 | Stretching of rubber band | Reversible |
| 9 | Making of chapatti | Irreversible |
| 10 | Grain to its flour | Irreversible |
| 11 | Boiling of egg | Irreversible |
| 12 | Dry to wet cloth | Reversible |
| 13 | Rice to rice flour | Irreversible |
| 14 | Cold water to hot water | Reversible |
| 15 | Batter to idli | Irreversible |
| 16 | Woollen yarn to knitted sweater | Reversible |
| 17 | Straight string to a coiled string | Reversible |
| 18 | Bud to flower | Irreversible |
| 19 | Milk to paneer | Irreversible |
| 20 | Cow dung to biogas | Irreversible |
| 21 | Ice cream to molten ice cream | Reversible |

##### **Q26. Classify the change as slow or fast change.**

|  |  |  |
| --- | --- | --- |
| S.No. | Change | Type of Change |
| 1 | Spinning of top | Fast change |
| 2 | Change of day and night | Slow change |
| 3 | Formation of curd from milk | Slow change |
| 4 | Burning of paper | Fast change |
| 5 | Change in weather | Slow change |
| 6 | Melting of ghee on heating | Fast change |

##### **Q27. What is evaporation? What kind of change it is? Give a reason in support of your answer.**

Ans. Evaporation is the process in which water changes to gaseous state due to an increase in temperature.

Yes, it is a reversible change because water vapor can be converted back into water on cooling.

##### **Q28. How curd is formed? Is it a reversible change?**

Ans. A small quantity of curd is added to warm milk. The milk is stirred and is set aside for a few hours at a warm place. In a few hours, the milk changes into curd. This change is irreversible.

##### **Q29. Iron blade of tools has a ring in which the wooden handle is fixed. Why the ring is made slightly smaller in size than wooden handle?**

Ans. Iron blade of tools has a ring in which the wooden handle is fixed. The ring is made slightly smaller in size than wooden handle because handle fits easily as it expands on heating and contracts on cooling.

 **Q30. Why a thick layer of Plaster of Paris is applied over the bandage to keep the fractured bone immobilized?**

Ans. When water is added to Plaster of Paris, it sets into a hard mass thus it keeps the fractured bone on its place and prevents it from moving while it heals. That’s why a thick layer of Plaster of Paris is applied over the bandage to keep the fractured bone immobilized.

##### **Q31. Differentiate between toy aeroplane made by folding paper and toy aeroplane cutout.**

Ans.

|  |  |
| --- | --- |
| **Folding paper toy aeroplane** | **Cutout of a toy aeroplane** |
| 1. It is reversible change. | 1. It is irreversible change. |
| 2. It is a 3-D object. | 2. It is a 2-D object |

##### **Q32. Differentiate between making chocolates of different shapes and baking cakes of different shapes.**

Ans.

|  |  |
| --- | --- |
| **Chocolates** | **Cakes** |
| 1. It is reversible change. | 1. It is irreversible change. |
| 2. Shapes and sizes change. | 2. Shape and taste change |
|  |  |

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