

8A
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subject - science.
class - 7th
chapter - 6th

physical and chemical change.

(Book activity)

1) classify the changes involved in the following processes as physical or chemical change.

Ans →

- a) photosynthesis → chemical change
- b) Dissolving sugar in water → physical change.
- c) Burning of coal → chemical change.
- d) melting of wax → physical change.
- e) Beating aluminium to make aluminium foil
→ (physical change)
- f) Digestion of food → (chemical change)

2) state whether the following statements are true or false. In case a statement is false, write the corrected statement in your note book.

a) cutting a log of wood into pieces is a chemical change.

Ans → False (physical change)

②
b) Formation of manure from leaves is a physical change.

Ans → False (chemical change)

c) Iron pipes coated with zinc do not get rusted easily.

Ans → (True)

d) Iron and rust are the same substances.

Ans → (False)

e) Condensation of steam is not a chemical change.

Ans → ~~False~~ (chemi. physical change).
True.

3) Fill in the blanks in the following statement.

Ans →
a) When carbon dioxide is passed through lime water,

it turns milky due to the formation of

Calcium carbonate

b) The chemical name of baking soda is sodium hydrogen carbonate.

c) Two methods by which rusting of iron can be prevented are oil paint and galvanization

(3)

d) change in which only physical properties of a substance change are called physical change.

e) change in which new substances are formed are called chemical change.

(NOTE BOOK)

4) when baking soda is mixed with lemon juice, bubbles are formed with the evolution of a gas. What type of change is it? Explain.

Ans → When baking soda is mixed with lemon juice it forms a new substance, lemon salt and water, carbon dioxide gas is evolved. It is chemical change.

5) when a candle burns, both physical and chemical change take place. Identify these changes. Give another example of a familiar process in which both the physical and chemical change take place.

Ans → Candle burning →

1) physical change is melting of wax.

2) The chemical change is the burning of wax with the evolution of CO_2 .

Digestion of food.

(4)

① Physical change is the breakdown of longer food molecule to simple ones.

2) The chemical change is the digestion of food by the action of HCl and enzymes.

6) How would you show that setting of curd is a chemical change.

Ans → The setting of a curd is a chemical change because new substance formed and its properties are different from the milk.

7) Explain why burning of wood and cutting in into small pieces are considered are two different types of changes.

Ans → When we cut wood into small pieces the properties of wood do not change but when we burn wood new substances is formed.

8) Describe how crystals of copper sulphate is prepared.

Ans → Take a cupful of water in a beaker and add a few drops of dilute sulphuric

acid continue adding copper sulphate powder till no more powder can be dissolved. Filter the solution and allow it to cool do not disturb the solution when it is cooling.

Look at the solution after some time you

- Can see the crystals of copper sulphate.

9) Explain how painting of an iron gate prevents it from rusting.

Ans → Rusting of iron requires contact with water (moisture) and oxygen. By painting an iron

- gate, we prevent the contact between iron, oxygen and water (moisture) this help is preventing rusting of iron.

10) Explain why rusting of iron object is faster in coastal areas than in deserts.

Ans → Rusting of iron requires contact with water (moisture) and oxygen. In coastal areas, humidity is more in comparison

to that in deserts, hence, rusting of iron objects is faster in coastal area than in deserts.

11) The gas ^(Book activity) we use in the kitchen is called (Liquified petroleum gas. (LPG)). In the cylinder it exist as a liquid. when it comes out from the cylinder it becomes a gas (change A)

then it burns (change -B). The following statement pertain to these changes. Choose the correct one.

Ans - ii) (process -B is a chemical change)

12) Anaerobic bacteria digest animal waste and produce biogas (change A). The biogas is then burnt as fuel (change B). The following statement pertain to these change. Choose the correct one.

Ans -> both processes A and B are chemical change.

Additional question

(7)

(NOTE BOOK)

1) States some differences between physical and chemical changes.

Ans → 1) Physical changes —:

1) If a substance acquires changes in its shape, size, colour and state, then the change is said to be a physical change.

2) These changes are almost reversible.

3) No new substances will be formed.

4) Absorption and exchange of any type of energy will not be done.

5) Temporary change.

Chemical changes

1) If the composition of any substance gets changed, then it is a chemical change.

2) This type of change is irreversible.

3) Always a formation of new substances.

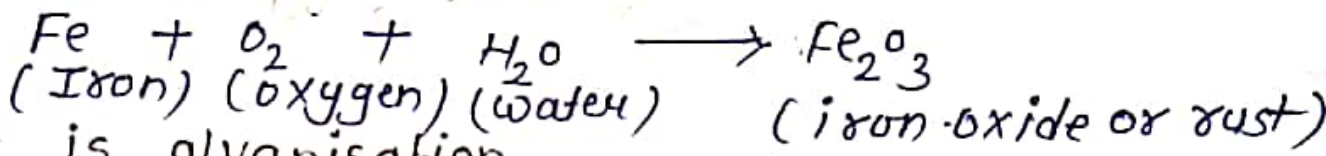
4) There is always an exchange of energies.

5) Chemical change is always permanent.

(8)

2) what is rusting.

Ans → If any iron substance come in contact with air and moisture ; it acquires a brownish substance called rust.



3) what is galvanisation.

Ans → This process of depositing a layer of zinc on iron is called galvanization. The iron pipes we use in our homes to carry water are galvanized to prevent rusting.

4) How do you prevent rusting?

Ans → Rusting can be prevented by :-

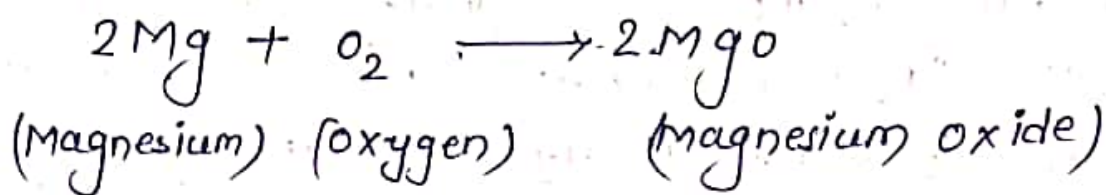
① - prevent iron from coming in contact with air and moisture by applying grease or paint.

②) Another way is to deposit a layer of metal like zinc or iron (galvanization).

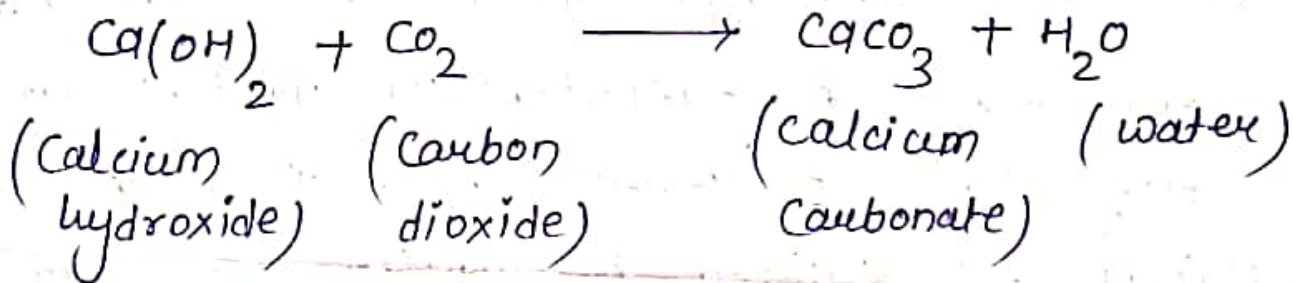
5) Give some examples of chemical change? (9)

Ans ↓

① Burning of magnesium



2) Reaction between calcium hydroxide and carbon dioxide



3) Reaction between copper sulphate and iron.

