Multiple Choice Questions

1. **The gas that turns lime water milky is**
   (a) Carbon dioxide
   (b) Oxygen
   (c) Nitrogen
   (d) Hydrogen

2. **Which of the following is an undesirable change?**
   (a) Ripening of fruit
   (b) Cooking of food
   (c) Making curd
   (d) Rusting of iron

3. **The process of breaking of rocks into soil is called**
   (a) Combustion
   (b) Respiration
   (c) Weathering
   (d) Freezing

4. **Which of the following is a reversible change?**
   (a) Cooking of food
   (b) Burning of paper
   (c) Rusting of iron
   (d) Melting of wax

5. **The lowest temperature at which a substance catches fire is known as**
   (a) Ignition temperature
   (b) Freezing point
   (c) Melting point
   (d) Boiling point

6. **Burning of magnesium is an example of**
   (a) Physical change
   (b) Chemical change
   (c) Temporary change
   (d) Reversible change

7. **Which substance is necessary for combustion to take place?**
   (a) Nitrogen
   (b) Carbon dioxide
   (c) Hydrogen
   (d) Oxygen

8. **Which of the following is a physical change?**
   (a) Burning of candle
   (b) Rusting of iron
   (c) Formation of curd
   (c) Melting of ice

9. **Rust is chemically known as**
   (a) Iron sulphide
   (b) Iron carbonate
   (c) Iron oxide
   (d) Iron chloride

10. **A change in which a new substance is formed is called a**
(a) Physical change
(b) Temporary change
(c) Chemical change
(d) Reversible change

Fill in the blanks :

11. A change in which no new substance is formed is called a _____ change.

12. The gas that turns lime water milky is _____.

True / False

13. Cutting paper into pieces is a physical change.

14. Chemical changes result in the formation of new substances.

Very Short Type Questions

15. What is a physical change?

16. What is combustion?

Short Type Questions

17. Why is rusting called a chemical change?

18. What is ignition temperature? Why is it important?

Essay Type Questions

19. Differentiate between physical and chemical changes.

20. Explain the conditions necessary for combustion.

HOTS

21. **Assertion (A):** Burning of a candle involves both physical and chemical changes.
Reason (R): Melting of wax is a physical change while burning of wax vapour is a chemical change.
Choose the correct option:
a) Both A and R are true and R is the correct explanation of A
b) Both A and R are true but R is not the correct explanation of A
c) A is true but R is false
d) A is false but R is true

1. **(a)** Carbon dioxide
2. **(d)** Rusting of iron
3. **(c)** Weathering
4. **(d)** Melting of wax
5. **(a)** Ignition temperature
6. **(b)** Chemical change
7. **(d)** Oxygen
8. **(d)** Melting of ice
9. **(c)** Iron oxide
10. **(c)** Chemical change
11. Physical
12. Carbon dioxide
13. FALSE
14. TRUE
15. A physical change is a change in which only the appearance of a substance changes and no new substance is formed.
16. Combustion is the chemical process in which a substance reacts with oxygen to produce heat and light.
17. Rusting is called a chemical change because when iron reacts with oxygen and moisture in the air, a new substance called iron oxide is formed. This new substance has different properties from iron and the change cannot be easily reversed.
18. Ignition temperature is the lowest temperature at which a substance starts burning. It is important because without reaching this temperature, a substance cannot catch fire and combustion cannot take place.
19. Physical and chemical changes are two important types of changes observed in daily life. In a physical change, only the shape, size, state, or appearance of a substance changes and no new substance is formed. These changes are usually temporary and reversible in nature. For example, melting of ice into water and folding of paper are physical changes. In a chemical change, one or more new substances with different properties are formed. These changes are generally permanent and irreversible. Examples of chemical changes include rusting of iron, burning of paper, and formation of curd from milk. Thus, the main difference between physical and chemical changes lies in the formation of a new substance and reversibility.

20. Combustion is a chemical process in which a substance reacts with oxygen and produces heat, light, and sometimes sound. For combustion to take place, three essential conditions must be present. First, there must be a combustible substance or fuel, such as wood, coal, or petrol. Second, oxygen must be available in sufficient quantity to support the burning process. Third, the fuel must be heated to its ignition temperature, which is the minimum temperature required for a substance to catch fire. If any of these conditions is absent, combustion will not occur. For example, cutting off oxygen by covering a burning candle with a glass stops the flame. These three conditions together are known as the fire triangle.

21. Correct Answer: (a)

Explanation:

The assertion is true because a candle shows melting of wax and burning together. The reason is also true and correctly explains the assertion because melting is a physical change and burning of wax vapour forms new substances, which is a chemical change.