

# PHYSICAL AND CHEMICAL CHANGES

## WORKSHEET - 1

1. What is a physical change? Give examples. [2]

Ans. \_\_\_\_\_  
\_\_\_\_\_

2. What is a chemical change? Give examples [2]

Ans. \_\_\_\_\_  
\_\_\_\_\_

3. Give an example of a chemical change in which we observe change in colour during the reaction. [2]

Ans. \_\_\_\_\_  
\_\_\_\_\_

4. Why does rusting take place faster near the coastal areas? [2]

Ans. \_\_\_\_\_  
\_\_\_\_\_

5. Classify the following changes as physical or chemical change: [3]

(i) Rusting of iron \_\_\_\_\_

(ii) Burning of crackers \_\_\_\_\_

(iii) Digestion of food \_\_\_\_\_

(iv) Melting of ice \_\_\_\_\_

(v) Chopping of wood \_\_\_\_\_

(vi) Respiration \_\_\_\_\_

(vii) Growing of a seed into a plant \_\_\_\_\_

(viii) Dissolving sugar in water \_\_\_\_\_

6. Give one standard test for Carbon Dioxide. Also write the equation involved. Is it a physical or a chemical change? [3]

Ans. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. Define galvanisation. Why are the iron pipes in our homes galvanized? [3]

Ans. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. Write three differences between a physical and a chemical change. [3]

Ans. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. What do you observe when you mix vinegar and baking soda? How do you perform a test for the gas released during the reaction? [3]

Ans. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. State four characteristics of a physical change. [3]

Ans \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. State four characteristics of a chemical change. [3]

Ans \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. Define rusting. What are the conditions necessary for rusting? What is its chemical formula [5]

Ans \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. Explain two methods by which rusting of iron can be prevented. [5]

Ans \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# PHYSICAL AND CHEMICAL CHANGES

## WORKSHEET - 2

### 1. Fill in the blanks

- 1) when washing soda is added to \_\_\_\_\_ carbon dioxide gas is produced. [1]
- 2) Rotation of fan is \_\_\_\_\_ change. [1]
- 3) A glowing of tube light is a \_\_\_\_\_ [1]
- 4) Chemical name of washing soda is \_\_\_\_\_ [1]
- 5) Rusting is faster in \_\_\_\_\_ water. [1]
- 6) Two methods by which rusting can be prevented by \_\_\_\_\_ and \_\_\_\_\_ [1]
- 7) Fermentation of fruit juice is a \_\_\_\_\_ change. [1]
- 8) \_\_\_\_\_ is the process of coating of thin layer of zinc on iron sheets. [1]
- 9) Changes in which new substance are formed are called \_\_\_\_\_ changes. [1]
- 10) Chemical formula of copper sulphate is \_\_\_\_\_ [1]
- 11) Large crystals of pure substances are obtained by \_\_\_\_\_ [1]

### 2. Identify the following as physical or chemical changes.

- (i) NaCl dissolves in water. \_\_\_\_\_ [1]
- (ii) Silver tarnishes \_\_\_\_\_ [1]
- (iii) An apple is cut \_\_\_\_\_ [1]
- (iv) Heat changes water to steam \_\_\_\_\_ [1]
- (v) Baking soda reacts to vinegar \_\_\_\_\_ [1]
- (vi) Fe (Iron)rusts \_\_\_\_\_ [1]
- (vii) Ice melts \_\_\_\_\_ [1]
- (viii) Milk sours \_\_\_\_\_ [1]
- (ix) Sugar dissolves in water \_\_\_\_\_ [1]
- (x) Food is digested \_\_\_\_\_ [1]

### 3. Complete the following

- (a) Magnesium + Oxygen → \_\_\_\_\_ [1]
- (b) Magnesium oxide + Water → \_\_\_\_\_ [1]
- (c) copper sulphate + Iron → \_\_\_\_\_ [1]
- (d) Sulphuric acid + Baking soda → \_\_\_\_\_ [1]
- (e) Carbon dioxide + Lime water → \_\_\_\_\_ [1]

### 4. Match the following [2]

- | Column A                | Column B                 |
|-------------------------|--------------------------|
| 1) Milk changes to curd | slow change              |
| 2) Temporary change     | irreversible change      |
| 3) Change of season     | physical change          |
| 4) Rusting of iron      | can be compressed easily |
| 5) Air                  | chemical change          |

**5. Give reason in brief.**

1. Boiling of water, a chemical change. [2]

**Ans** \_\_\_\_\_  
\_\_\_\_\_

2. Copper sulphate turns green Iron nails are left in it stay for thirty minutes. [2]

**Ans** \_\_\_\_\_  
\_\_\_\_\_

3. Painting prevent rusting. [2]

**Ans** \_\_\_\_\_  
\_\_\_\_\_

**6. Answer the following questions (40-50 words)**

I. What happened when carbon dioxide is passed through lime water? [3]

**Ans.** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

II. How would you show that setting of curd is a chemical change? [3]

**Ans** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

III. When washing soda is mixed with lemon juice, bubbles are formed with the evolution of gas. What type of change is it. Explain? [3]

**Ans** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

IV. Explain why burning of wood and cutting it in to small piece are considered as two different types of changes? [3]

**Ans** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

V. How melting of wax is different from burning of wax? [3]

**Ans** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

VI. What is crystallization? How do people get salt from the sea in hot countries? [3]

**Ans** \_\_\_\_\_  
\_\_\_\_\_

VII. Describe how crystals of copper sulphate are prepared?

[3]

Ans.

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**7. Answer the following questions (50-60 words)**

1. When iron nail is put in to a beaker containing copper sulphate solution, the blue colour of the Solution slowly change in to Green – [5]

- a) Why does the colour of the solution change?
- b) Write the equation involved in this process?
- c) Is it a chemical or physical change?

Ans

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2. How would you prove that breaking down of ozone layer and the process of photosynthesis are Chemical changes? [5]

Ans

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3. Burning of a candle may be considered as showing physical and chemical changes occurring simultaneously Explain? [5]

Ans

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