

# SHREE VASISHTHA VIDHYALAYA

## Subject-Science

### Chapter name- Combustion and Flame (Worksheet)

#### A. Multiple Choice Questions (MCQs)

1. Which of the following is a combustible substance?

- a) Water    b) Iron    c) Petrol    d) Sand

2. The hottest part of a candle flame is:

- a) Outer zone    b) Middle zone    c) Inner zone    d) Base of the wick

3. Which of the following is an example of rapid combustion?

- a) Rusting of iron    b) Burning of paper  
c) Formation of a compost heap    d) Photosynthesis

4. Which gas is mainly responsible for fire?

- a) Oxygen    b) Carbon dioxide    c) Nitrogen    d) Hydrogen

5. Match the following types of combustion with examples:

Type of Combustion    Example

- i) Spontaneous    a) Fire in a forest  
ii) Rapid    b) Burning of wood  
iii) Slow    c) Rusting of iron

6. The process of burning in the presence of sufficient oxygen is called:

- a) Incomplete combustion    b) Complete combustion  
c) Explosion    d) Ignition

7. Which of the following is a product of complete combustion of a hydrocarbon?

- a)  $\text{CO}_2$  and  $\text{H}_2\text{O}$     b) CO and C    c)  $\text{O}_2$  and CO    d)  $\text{H}_2$  and  $\text{O}_2$

8. The yellow color of a candle flame is due to:

- a) Hot gases    b) Incandescence of carbon particles  
c) Reflection of light    d) Chemical reaction

9. Which type of combustion is used in petrol engines?

- a) Slow combustion                      b) Rapid combustion
- c) Spontaneous combustion              d) Explosive combustion

10. Which of the following is an inflammable material?

- a) Petrol                      b) Sand                      c) Water                      d) Glass

### **B. Fill in the Blanks**

1. The process of burning in the presence of oxygen is called \_\_\_\_\_.
2. The \_\_\_\_\_ zone of a flame is the hottest.
3. Coal burning in a furnace shows \_\_\_\_\_ combustion.
4. \_\_\_\_\_ is a sign of incomplete combustion.
5. Wood, paper, and petrol are examples of \_\_\_\_\_ substances.

### **C. One Word Answers**

1. What is the term for a substance that catches fire easily?
2. Name the colorless, odorless gas that supports combustion.
3. Which part of a candle flame is the coolest?
4. Name one product of incomplete combustion.
5. What type of combustion occurs without any external spark?

### **D. Short Answer Questions**

1. Define combustion.
2. Differentiate between complete and incomplete combustion.
3. What are the three zones of a candle flame?
4. Give two examples of spontaneous combustion.
5. Why does incomplete combustion produce carbon monoxide?

### **E. Long Answer Questions**

1. Explain the process of combustion and the conditions required for it.
2. Describe the structure of a candle flame with a labeled diagram.
3. Explain the harmful effects of incomplete combustion.
4. Write a note on inflammable and combustible substances.
5. Discuss the role of oxygen in combustion.

### **F. Assertion and Reason Questions**

Instructions: Read the statements carefully and choose the correct option:

(a) Both Assertion (A) and Reason (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. Assertion (A): The outer zone of a flame is the hottest.

Reason (R): Complete combustion takes place in the outer zone.

2. Assertion (A): Incomplete combustion produces carbon monoxide.

Reason (R): Insufficient oxygen leads to incomplete burning of fuel.

3. Assertion (A): Petrol is more inflammable than water.

Reason (R): Petrol catches fire easily at low temperature.

4. Assertion (A): Rusting of iron is an example of spontaneous combustion.

Reason (R): Spontaneous combustion occurs without external ignition.

5. Assertion (A): Rapid combustion releases large amounts of energy in a short time.

Reason (R): Rapid combustion occurs slowly over a long period.