



परमाणु ऊर्जा शिक्षणसंस्था  
Atomic Energy Education Society  
कार्यपत्रक / Worksheet (2025-26)

कक्षा/Class: \_\_\_\_\_ शिष्य/Subject: \_\_\_\_\_ माह/ Month: \_\_\_\_\_ अंक/Marks:40

माह/ Month: \_\_\_\_\_ दिया गया पाठ्यक्रम/ Portion covered: Metals And Non Metals

विद्यार्थी का नाम/Name of the student: \_\_\_\_\_

अनु क्रमांक /Roll No. \_\_\_\_\_ कक्षा/अनुभाग Class /Sec.: \_\_\_\_\_ दिनांक /Date: \_\_\_\_\_

**Section –A Multiple Choice Questions (10 Marks)**

- Which of the following metal is most malleable?  
a) Iron      b) Copper      c) Gold      d) Aluminium
- A non-metal that conducts electricity is-----  
a) Sulphur      b) Phosphorus      c) Graphite      d) Bromine
- Which of the following metal reacts vigorously with cold water?  
a) Iron      b) Copper      c)Potassium      d) Zinc
- Rusting of iron occurs in the presence of-----  
a) Hydrogen and sunlight      b) Carbondioxide and water  
c) Oxygen and water      d) Nitrogen and water
- Which one of the following is not a physical property?  
a) Malleability      b) Ductility      c) Elecrolysis of water      d) Sonorous nature
- Which one of the following shows metallic luster but is a non-metal?  
a) Sulphur      b) Iodine      c) Carbon      d) Phosphorus.
- The most abundant metal in the earth crust is.....  
a) Aluminium.      b) carbon      c) Magnesium.      d) Iron
- The liquid non- metal is \_\_\_\_\_.  
a) Iron      b) Copper      c) Aluminium      d) Bromine
- Which of the following metal is stored under kerosene?  
a) Zinc      b) Potassium      c) Magnesium      d) Aluminium
- Electrical conductivity is highest in which of the following metals .....

a) Iron      b)Mercury      c) Silver      d) Lead

### Section B: Assertion and Reason (4 Marks)

Choose:

- 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

11. Assertion(A): Aluminium is highly ductile.

Reason (R) : Ductility is the ability to be drawn into thin wires.

12. Assertion(A) : Magnesium reacts with steam to form hydrogen gas.

Reason (R) : Magnesium reacts with cold water rapidly.

13. Assertion(A) : Iron rusts faster in saline water.

Reason (R) : Salt increases the conductivity of water, speeding up rusting.

14. Assertion(A) : Sodium is a soft metal and can be cut with a knife.

Reason(R) : Sodium has a low melting point.

### Section C: Very Short Answers (10 Marks)

- 15. Why are metals sonorous?
- 16. What happens when iron nails are placed in copper sulphate solution?
- 17. How does the physical state of sodium help in identifying it as a metal?
- 18. Why is magnesium ribbon cleaned before burning in air?
- 19. why carbon is not used to extract sodium from its compounds? Give reasons .

### Section D: Short Answers (12 Marks)

- 20. How does the reaction of metals with oxygen differ among magnesium, iron, and copper?
- 21. Write a short note on the thermal and electrical conductivity of metals with examples.
- 22. How does malleability help in the usage of metals for construction? Give two examples.
- 23. Write a short activity to show that iron rusts in the presence of air and moisture.

### Section E: Case-Based Question (4 Marks)

24 . Read the passage and answer the following questions:

**Case:** A student placed a clean magnesium ribbon in a test tube and heated it. A white powder was formed. The ash (Magnesium oxide) obtained was dissolved in warm water. When the solution was tested with moist red litmus paper, it turned blue.

- 24a) Name the white powder formed in the above reaction.
- 24 b) Which property of magnesium is shown when it reacts with oxygen?
- 24c) Write a balanced chemical equation for the reaction.
- 24 d) Why does red litmus paper turn blue?