

- Column-II:
- a) Bird's wings 1) Inspired aircraft Design
 - b) Water Cycle 2) Evaporation and precipitation
 - c) Metals 3) Sundial
 - d) Shadow 4) Good conductor of Electricity

Section E:

Assertion and Reason ($2 \times 1 = 2$ Marks)

- Directions: Mark (A) if both are true and R is correct explanation,
(B) if both are true but R is not the explanation,
(C) if A is true but R is false,
(D) if A is false but R is true.

- 5) Assertion (A): Water condenses faster when heated.
Reason (R): Heat gives energy to water molecules to escape into air.
- 6) Assertion (A): A weathering of rock is an irreversible change.
Reason (R): Weathering occurs due to action of wind and water.

Section F:

Short Answer Questions ($3 \times 1 = 3$ Marks)

- 7) How are shadows formed?
- 8) Define eclipse.
- 9) Why burning of wood is irreversible change?

Section G:

Long Answer Questions ($3 \times 2 = 6$ Marks)

- 9) How does understanding the properties of different materials help in everyday life?
- 10) Scientific experiments and observations can lead to a deeper understanding of the environment and human activities. Justify this statement
- 11) How human activities affect the environment?

Section H:

12) Case Study ($5 \times 1 = 5$ Marks)

Read the following passage and answer the questions that follow:

"Some changes are slow such as rocks breaking into pebbles while others are fast like burning a candle. Combustion, cooking and rusting are examples of irreversible changes. On the basis of reversibility, changes can be categorized into two types: Reversible changes, where a substance can be restored to its initial state, and Irreversible changes, where it cannot be restored."

- a) Give one example of a slow change mentioned in the text.
- b) Name two examples of irreversible changes provided in the passage.
- c) Define a reversible change based on the text.
- d) Is the ripening of fruit a reversible or irreversible change?
- e) Which type of change is combustion?