



## The Science of Water

### A. Choose the correct answer:

1. What is the chemical formula of water?

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

2. Which of the following properties makes water a universal solvent?

- a) It is a gas at room temperature
- b) It has a high boiling point
- c) It dissolves many substances
- d) It is colorless and tasteless

3. Which of the following processes is responsible for the formation of clouds?

- a) Condensation
- b) Evaporation
- c) Precipitation
- d) Transpiration

### B. Fill in the Blanks:

1. Water is composed of two hydrogen atoms and one \_\_\_\_\_ atom.
2. The process by which plants lose water in the form of vapor is called \_\_\_\_\_.
3. Water covers approximately \_\_\_\_\_% of the Earth's surface.

### C. Case Study:

A scientist, Dr. Meera, conducted a study on water consumption habits in different households. She observed the daily water usage patterns of three families:

- **Family A** used water efficiently, stored rainwater, and followed conservation techniques.
- **Family B** used excessive amounts of water for daily activities and had frequent water wastage.
- **Family C** relied mainly on bottled water due to a lack of clean water supply in their area.



**After three months, Dr. Meera recorded the following findings:**

- **Family A** had lower water bills and sufficient water supply even during shortages.
- **Family B** faced difficulties during water shortages and had high water expenses.
- **Family C** spent a significant portion of their income on purchasing bottled water.

**Questions & Answers:**

1. What was Dr. Meera trying to analyze through her study?
2. How did Family A benefit from water conservation techniques?
3. Why did Family C rely on bottled water, and what challenges might they face in the long run?
4. Based on this study, why is water conservation important?

**D. Short Answer Questions:**

1. Why is water essential for all living organisms?
2. How does water help in regulating body temperature?
3. What are some traditional methods of water purification used in ancient times?

**E. Long Answer Questions:**

1. Explain the different states of water in nature and the processes involved in the water cycle.
2. Discuss the importance of clean drinking water and the impact of water pollution on human health.
3. Describe different methods of water conservation and their significance in maintaining a sustainable water supply.