<u>Class 9 Science Worksheet 2 : Chapter 1 - Matter in Our</u> <u>Surroundings</u>

Student Details:

- Name: _______
- Class: _____
- Date: _____

Instructions:

- Answer all the questions.
- Write neatly and legibly.
- For MCQs, circle the correct option.
- For assertion and reason questions, choose the correct option and provide brief explanations if necessary.

Section A: Multiple Choice Questions (MCQs)

- 1. Which of the following statements is true for liquids?
- a) Liquids have a definite shape but no definite volume.
- b) Liquids have neither a definite shape nor a definite volume.
- c) Liquids have a definite volume but no definite shape.
- d) Liquids have both a definite shape and volume.
- 2. Which process is described as the change of a liquid to a gas at temperatures below its boiling point?
- a) Condensation

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b) Sublimation

- c) Evaporation
- d) Freezing
- 3. The property that allows a solid to return to its original shape after being deformed is known as:
- a) Elasticity
- b) Plasticity
- c) Malleability
- d) Ductility
- 4. Which of the following statements about gases is correct?
- a) Gases have fixed volume but no fixed shape.
- b) Gases can be compressed easily.
- c) Gas particles are closely packed.
- d) Gases have a definite shape and volume.
- 5. The measure of how much mass is contained in a given volume is called:
- a) Mass
- b) Volume
- c) Density
- d) Weight

Section B: Assertion and Reason

Instructions: For each assertion and reason pair, choose the correct option.

6. Assertion (A): Solids have a definite volume and shape.

Reason (R): The particles in solids are loosely packed and move freely.

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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.

7. Assertion (A): The rate of diffusion is slower in solids compared to liquids.

Reason (R): Solid particles are closely packed and do not move freely.

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.

Section C: Short Answer Questions

- 8. Explain why solids are incompressible compared to liquids and gases.
- 9. What happens to the temperature of a substance during a phase change, such as melting or boiling?
- 10.Describe how the density of an object affects whether it will float or sink in a liquid.
- 11.Explain the difference between sublimation and deposition with examples.

Section D: Long Answer Questions

12.Discuss the arrangement and movement of particles in solids, liquids, and gases. How do these arrangements and movements affect the physical properties of these states of matter?

- 13.Explain the concept of diffusion in detail. Provide examples of diffusion in gases, liquids, and solids, and describe how temperature and concentration gradients affect the rate of diffusion.
- 14.Describe the process of condensation and provide real-life examples where condensation is commonly observed.
- 15.Discuss the changes in state of matter during the water cycle, including evaporation, condensation, and precipitation. Include diagrams to illustrate these processes.

