

CBSE Class 9 Science – Chapter 2: Is Matter Around Us Pure? (Sample Paper)

Time: 1 Hour

Maximum Marks: 25

Section A: Very Short Answer Questions (1 Mark Each)

1. Define a **homogeneous mixture** with one example.
 2. Give two examples of **colloids** found in daily life.
 3. Name the technique used to separate a mixture of **salt and water**.
 4. Which separation technique is used to obtain **pure copper sulfate from its solution**?
 5. Identify the **solute and solvent** in a solution of **sugar and water**.
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Section B: Short Answer Questions (2 Marks Each)

6. Differentiate between **true solution, colloid, and suspension** with one example of each.
 7. Why is air considered a **homogeneous mixture**, even though it contains different gases?
 8. Explain why alloys are considered **mixtures** and not compounds.
 9. Describe the **Tyndall effect** with one example.
 10. How can **sublimation** be used to separate **ammonium chloride** from salt?
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Section C: Long Answer Questions (3 Marks Each)

11. Write three differences between **elements, compounds, and mixtures** with examples.
 12. How would you separate a mixture of **sand, salt, and iron filings**? Explain the steps involved.
 13. A beaker contains a mixture of **water, mustard oil, and iron nails**. Explain how you can separate each component.
 14. What are **saturated, unsaturated, and supersaturated solutions**? Give one example of each.
 15. Explain the process of **fractional distillation** with an example where it is used in real life.
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Section D: HOTS (Higher Order Thinking Skills) – Tricky Questions (4 Marks Each)

16. A student accidentally mixed **sodium chloride, sand, and iron filings**. Describe a method to separate them step by step.

17. **Ravi prepared a sugar solution, but his friend called it a ‘mixture’ and not a ‘compound.’** Justify why the sugar solution is a mixture and not a compound.
18. Suppose you are given a sample of **ink and water**. Which method will you use to separate them? Explain the process with a diagram.
19. Why do colloidal particles not settle down, whereas in suspensions, they do? Give examples of each.
20. Explain how the **crystallization technique** is better than **evaporation** for obtaining pure solids.