

**Multiple Choice Questions**

- A substance is said to be pure if it**
 - Contains no impurities
 - Has only one kind of particle
 - Is naturally occurring
 - Stone
- Which of the following is a homogeneous mixture?**
 - Soil
 - Smoke
 - Salt solution
 - Sand and water
- The component present in a larger amount in a solution is called**
 - Solute
 - Solvent
 - Residue
 - Filtrate
- Which mixture shows Tyndall effect?**
 - Sugar solution
 - Copper sulphate solution
 - Milk
 - Salt solution
- Which of the following is a suspension?**
 - Ink
 - Air
 - Muddy water
 - Vinegar
- The scattering of light by colloidal particles is known as**
 - Diffusion
 - Reflection
 - Refraction
 - Tyndall effect
- Brass is an example of**
 - Compound
 - Element
 - Solution
 - Alloy
- Which method is used to separate butter from curd?**
 - Filtration
 - Centrifugation
 - Evaporation
 - Sublimation
- A saturated solution is one which**
 - Contains excess solute
 - Dissolves solute slowly
 - Cannot dissolve more solute at given temperature
 - has uniform colour

10. Which of the following is a compound?

- (a) Air (b) Soil
(c) Iron sulphide (d) Brass

Fill in the blanks :

11. A solution that cannot dissolve more solute at a given temperature is called a _____ solution.
12. The substance that gets dissolved in a solution is called the _____.

True / False

13. Colloids are homogeneous mixtures.
14. The composition of a compound is always fixed.

Very Short Type Questions

15. What is a mixture?
16. Name one example of a colloid.

Short Type Questions

17. Why are solutions considered stable mixtures?
18. State any two differences between a suspension and a colloid.

Essay Type Questions

19. Explain solutions, suspensions and colloids in detail with their properties and examples.
20. Describe the difference between mixtures and compounds with suitable examples.

HOTS

21. **Assertion (A):** Milk is considered a heterogeneous mixture.
Reason (R): Milk shows Tyndall effect due to the presence of colloidal particles.
- 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

**Chapter-2 | Is Matter
Around Us Pure?****Worksheet-1****Answer & Solution****JINENDER SONI**
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1. (b) Has only one kind of particle
2. (c) Salt solution
3. (b) Solvent
4. (c) Milk
5. (c) Muddy water
6. (d) Tyndall effect
7. (d) Alloy
8. (b) Centrifugation
9. (c) Cannot dissolve more solute at given temperature
10. (c) Iron sulphide
11. Saturated
12. Solute
13. False
14. True
15. A mixture is a combination of two or more substances mixed in any proportion.
16. Milk.
17. Solutions are stable because the solute particles are very small, evenly distributed, and do not settle down on standing. They cannot be separated by filtration.
18. • Suspension particles are visible and settle down, while colloidal particles are not visible and remain stable.
• Suspensions can be separated by filtration, but colloids cannot.

19. Matter around us mostly exists in the form of mixtures, which can be classified into solutions, suspensions, and colloids based on the size of particles and their properties. A solution is a homogeneous mixture of two or more substances. It consists of a solute and a solvent. The particles are extremely small and cannot be seen with the naked eye. Solutions do not scatter light, so they do not show the Tyndall effect. They are stable, and the solute particles do not settle on standing. Common examples are salt in water, sugar solution, and air.

A suspension is a heterogeneous mixture in which solid particles are dispersed in a liquid. The particles are large and visible. Suspensions scatter light and show the Tyndall effect. They are unstable, and the particles settle down when left undisturbed. They can be separated by filtration. Examples include muddy water and chalk powder in water.

A colloid is a heterogeneous mixture that appears homogeneous. Its particles are intermediate in size. Colloids scatter light, show the Tyndall effect, and are stable. The particles do not settle down and cannot be separated by ordinary filtration. Examples include milk, fog, and starch solution

20. Matter can exist as mixtures or compounds depending on how substances combine. A mixture is formed when two or more substances are mixed in any proportion without a chemical change. The components of a mixture retain their individual properties. Mixtures have variable composition and can be separated by physical methods such as filtration, evaporation, or magnetic separation. They may be homogeneous or heterogeneous in nature. Common examples of mixtures include air, soil, salt solution, and brass.

A compound is a pure substance formed when two or more elements combine chemically in a fixed ratio. The properties of a compound are completely different from those of its constituent elements. Compounds have a fixed composition and cannot be separated by physical methods. Chemical reactions are required to break a compound into simpler substances. Examples of compounds include water, sodium chloride, and iron sulphide. In mixtures, no new substance is formed, while in compounds a new substance with entirely different properties is produced. Mixtures show the properties of their components, whereas compounds have their own distinct characteristics.

21. Correct option: a

Explanation: Milk is a colloid and contains tiny fat particles dispersed in water. These particles scatter light and show Tyndall effect, proving milk is a heterogeneous mixture.