# CHAPTER-2 | Is Matter Around Us Pure

## QUIZ-01

1. Which of the following is a homogeneous mixture?
   A. Soil
   B. Air
   C. Oil and water
   D. Iron and sulphur mixture (B)

*Explanation :* Air is a homogeneous mixture of gases like nitrogen and oxygen that are uniformly distributed.

2. Which of the following is a property of a suspension?
   A. Particles are invisible to the naked eye
   B. Particles settle down when left undisturbed
   C. It is a stable mixture
   D. It cannot scatter light (B)

*Explanation :* Suspensions are unstable and the solute particles settle down if left undisturbed.

3. What is the particle size in a true solution?
   A. Larger than 100 nm
   B. Between 1 nm and 100 nm
   C. Less than 1 nm
   D. Cannot be determined (C)

*Explanation :* In a true solution, particle size is less than 1 nanometre, making it invisible to the naked eye.

4. Which separation technique is used to separate ammonium chloride from a mixture?
   A. Filtration
   B. Sedimentation
   C. Sublimation
   D. Evaporation (C)

*Explanation :* Ammonium chloride is separated by sublimation as it changes directly from solid to gas.

5. Which of the following mixtures will show the Tyndall effect?
   A. Salt solution
   B. Copper sulphate solution
   C. Milk
   D. Sugar solution (C)

*Explanation :* Milk is a colloid, and colloids scatter light, showing the Tyndall effect.

6. Which of the following is an example of a compound?
   A. Air
   B. Soil
   C. Water
   D. Milk (C)

*Explanation :* Water is formed by a chemical combination of hydrogen and oxygen in a fixed ratio, making it a compound.

7. Which method is used to separate butter from curd?
   A. Filtration
   B. Decantation
   C. Centrifugation
   D. Distillation (C)

*Explanation :* Butter is separated from curd using centrifugation, which separates components based on density.

8. Which of these will form a heterogeneous mixture?
   A. Sugar in water
   B. Copper sulphate in water
   C. Oil in water
   D. Iodine in alcohol (C)

*Explanation :* Oil and water do not mix uniformly and form a heterogeneous mixture.

9. What is the solute in soda water?
   A. Water
   B. Oxygen
   C. Sugar
   D. Carbon dioxide (D)

*Explanation :* Carbon dioxide gas is dissolved in water in soda water, making it the solute.

10. Which one of the following changes is a chemical change?
    A. Melting of butter
    B. Cutting of trees
    C. Burning of paper
    D. Freezing of water (C)

*Explanation :* Burning of paper results in the formation of new substances like ash and gases, which is a chemical change.