



# INDIAN SCHOOL DARSAIT

## DEPARTMENT OF CHEMISTRY



Subject : CHEMISTRY	Topic : IS MATTER AROUND US PURE	Date of Worksheet : 28.08.2019
Resource Person: Mrs. Sandhya Jitheesh		
Name of the Student : _____	Class & Division : IX----	Roll Number : ____

- 1 Define pure substance from the chemist's point of view. Is milk a pure substance? 1
- 2 Pure substances are 1
  - a) Elements and compounds
  - b) Compounds and homogeneous mixtures
  - c) heterogeneous mixtures
  - d) Elements
- 3 Explain the meaning of the term solubility. 1
- 4 Which of the following is separated by fractional distillation? 1
  - a) Gases present in air
  - b) Salt solution
  - c) Water and acetone
  - d) Copper sulphate solution
- 5 Differentiate between solute and solvent. 1
- 6 Smoke and fog, both are aerosols. In what way are they different? 1
- 7 Why filter paper cannot be used to separate colloidal particles? 1
- 8 Classify the following into elements and compounds.  $\frac{1}{2}$  mark each
  - a. H<sub>2</sub>O
  - b. He
  - c. Cl<sub>2</sub>
  - d. Co
  - e. CO<sub>2</sub>
  - f. Cu
  - g. FeS
  - h. Fe
  - i. S
- 9 Explain why particles of a colloidal solution do not settle down when left undisturbed, while in the case of a suspension they do so? 1
- 10 What is the name of the clear liquid formed when a solid dissolves in a liquid? 1
- 11 Classify the following into solutions, suspensions and colloids: ( $\frac{1}{2}$  mark each)  
(Soda water, Milk, Brine, Blood, Smoke in air, Ink, Chalk-water mixture, Milk of magnesia, Shaving cream)
- 12 **Name the process associated with the following** 1 mark each
  - a) Milk is churned to separate cream from it.
  - b) Settling of sand when a mixture of sand and water is left undisturbed for some time.
  - c) Fine beam of light entering through a small hole in a dark room, illuminates the particles in its path.
- 13 Can we separate alcohol dissolved in water by using a separating funnel? Why? 1

- 14 Two liquids 'A' and 'B' are miscible with each other at room temperature. Which separation technique will you apply to separate the mixture of 'A' and 'B' if the difference in their boiling point is  $15^{\circ}\text{C}$ ? 1
- 15 What would you observe when  
a) Saturated solution of potassium chloride prepared at  $60^{\circ}\text{C}$  is allowed to cool to room temperature. 1  
b) If carbon disulphide is added to a mixture of iron filings and sulphur powder. mark  
each
- 16 Calculate the amount of glucose required to prepare 250 g of 5% solution of glucose by mass. 2
- 17 Iron filings and sulphur were mixed together and divided into two parts, A and B. Part A was heated strongly while part B was not heated. Dilute hydrochloric acid was added to both the parts and evolution of gas was seen in both the cases. How will you identify the gases evolved? 2
- 18 A solution contains 20 g of sodium chloride in 180 g of water. Calculate the concentration. 2
- 19 Calculate the amount of water required to prepare 500 g of 2.5% solution of sugar. 2
- 20 Classify the following as physical and chemical changes. Give reason for your answer. 2  
(a) Burning of Candle (b) Melting of Ice (c) Burning of petrol in an engine
- 21 Non- metals are usually poor conductors of heat and electricity. They are non-lustrous, non-sonorous and non-malleable 2  
a) Name a lustrous non-metal.  
b) Name a non-metal which exists as a liquid at room temperature.  
c) The allotropic form of a non-metal is a good conductor of electricity. Name the allotrope.  
d) Which non-metal is known to form large number of compounds
- 22 State the principle of each of the following methods of separation of mixture. 3  
a. Centrifugation method b. Separation using separating funnel  
c. Separation by chromatography
- 23 How can we obtain different gases from air? Explain with the help of a flow diagram. 3