

**Sub-Topic- Classification of Substances****Level-1 (1Mark Each)****MCQ**

- 1) A pure liquid is obtained from a solution by:
  - a) Evaporation
  - b) Distillation
  - c) Filtration
  - d) Crystallisation
- 2) Components of crude petroleum can be separated by:
  - a) Distillation
  - b) Evaporation
  - c) Filtration
  - d) Fractional distillation
- 3) Examples of a homogenous mixture is:
  - a) Tap water
  - b) Distilled water
  - c) Sand and water
  - d) Water and Oil
- 4) In Chromatography the filter paper is:
  - a) Stationary phase
  - b) Mobile Phase
  - c) Mixture
  - d) None of the above
- 5) A set of mixtures is:

- a) Ink, honey, ice-cream, milk
- b) Tap water, gold, common salt, alloy
- c) Milk, brass, silver, honey
- d) Butter, petroleum, tap water, iron

6) Define Pure substances.

7) Define Impure substances

8) How are various substances differ from each other?

9) What do you mean by Metalloid?

10) Name two noble gases.

11) Define metal.

12) Define Non-metal

13) Give two examples of metalloids.

14) Define Mixtures

15) Mention one point of difference between homogenous and heterogenous mixtures.

16) Expand IUPAC

Level-2 (2 marks each)

- 1) Name the four classification of the Elements.
- 2) What do you understand by? -
  - a) Metalloids
  - b) Noble gases
- 3) Name the main metal present in:
  - a) Haemoglobin
  - b) Chalk
- 4) Mention any two characteristics of compound.
- 5) Justify: Why Sodium chloride is a compound?

- 6) Write the name of the following element Na, C, U, Ra, Fe, Co
- 7) Define Homogenous Mixture. Give Examples
- 8) Define Heterogenous Mixture. Give Examples.
- 9) What do you mean by Mixtures? Name its types.
- 10) What do you understand by molecule? Give example.

**LEVEL-3 (3 Marks Each)**

- 1) Differentiate between Homogenous and Heterogenous Mixtures.
- 2) Explain the characteristics of a Compound.
- 3) Explain the characteristics of a Mixture
- 4) Give four examples of non-metallic elements.
- 5) Write the formula of the following: - Washing Soda, Baking Soda, and Sand (Silica)
- 6) Name two solid-solid mixture.
- 7) Name two Solid-liquid mixture.
- 8) Name two Liquid- Liquid mixture.
- 9) Name two Gas-Liquid mixture.
- 10) Name two Gas- Gas mixture.
- 11) State and define the smallest unit of an element.
- 12) Mention the Latin name of Sodium and Potassium.
- 13) Explain alloy with an example.

**Sub-Topic- Separation of the components of a mixture****LEVEL-1(1 Mark each)**

- 1) What is the main purpose for the separation of mixture?
- 2) Define Handpicking.
- 3) Define winnowing
- 4) Define Magnetic separation.
- 5) Define Sublimation.
- 6) Define Gravitational method.
- 7) Define Sedimentation.
- 8) Define Decantation.
- 9) What do you mean by Supernatant Liquid?
- 10) Define Sediment.
- 11) Define Residue.
- 12) Define Filtrate.
- 13) Define Evaporation.
- 14) Define Filtration.
- 15) What do you mean by Crystallisation?
- 16) Define Distillation.
- 17) Define Fractional distillation.
- 18) What is a separating funnel?
- 19) Define Centrifugation.
- 20) Define Chromatography.

Fill up the Gaps: -

- 21) \_\_\_\_\_ are made up of same kind of atoms.
- 22) \_\_\_\_\_ and \_\_\_\_\_ are pure substances.
- 23) In a \_\_\_\_\_ the substances are not combined chemically.
- 24) Clay is separated from water by the method called \_\_\_\_\_.

25) \_\_\_\_\_ is a process to obtain a very pure form of a solid dissolved in a liquid.

26) Camphor and ammonium chloride can \_\_\_\_\_

Give One Word for the following: -

27) The solid particle that remains on the filter paper after the filtration.

28) The liquid which evaporates and then condenses during the process of distillation.

29) The process of transferring the clean liquid after the solid settles at the bottom of the container.

30) The process by which two miscible liquids are separated.

LEVEL-2 (3 Marks Each)

- 1) What are need for the separation of substances?
- 2) What are the Characteristic properties of a Pure Substances? Why do you need it?
- 3) Explain how will you separate a mixture of salt, chalk powder, and powdered camphor.
- 4) What are the advantages of Chromatography?
- 5) Explain with diagram how can you separate a mixture of Water and Mustard Oil.
- 6) Mention any three uses of Chromatography.
- 7) How is Distillation more advantageous than evaporation?
- 8) Explain how can you separate the components of Ink.
- 9) Mention some Practical application of Centrifugation.
- 10) What are Sublimable Substances? Give examples.

LEVEL-3 (5 Marks Each)

- 1) What do you mean Centrifugation? Mention its principle. Explain by an example.

- 2) Explain the process of chromatography. Mention the advantages and uses of Chromatography.
- 3) Explain with diagram how can one separate a mixture of Sand, Saw-dust and Salt.
- 4) What is crystallisation? Explain by giving an example. Mention how is it a better technique as compared to evaporation.
- 5) What do you mean by fractional distillation? Explain with a diagram, how can we separate a mixture of ethanol and water by this process.
- 6) Explain distillation with an example. Draw a diagram for it.
- 7) Describe an activity the process by which one can separate a mixture of mustard oil and water.
- 8) What do you mean by Sublimation? Explain, how can you separate a mixture of ammonium chloride, sand and salt with a diagram?
- 9) Describe an activity to separate a mixture of Sand, Saw-Dust and Salt with diagrams.
- 10) Explain, how can we separate the components of a mixture of Iron fillings, Sulphur and Common salt.
- 11) Name the Process by which the components of following mixtures can be separated.
  - a) Iron and Sulphur
  - b) Ammonium Chloride and sand
  - c) Common salt from sea water.
  - d) Chaff and Grain
  - e) Cream from milk.
- 12) What do you mean by Chromatography? Name the simplest type of chromatography. On what principle this method is based. What do mean by stationary phase and mobile phase in chromatography?
- 13) Mention the Principle involved in the following process: -
  - a) Sublimation
  - b) Solvent extraction method

- c) Fractional distillation
- d) Magnetic separation
- e) Filtration