

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 Supernant 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

