

AUGUST

PAGE:
 DATE: / /

CHAPTER-3

METHODS OF SEPARATION IN EVERYDAY LIFE

VERY SHORT ANSWER TYPE:

2. Define Condensation

Ans:- Condensation is the process by which a gas (Water Vapour) cools down and turns back into a liquid (water), like water droplets forming on metal lid when it cools after boiling vegetables (or) milk.

3. What is a Solute?

Ans:- A solute is the substance that gets dissolved in a liquid to make a solution
Ex: Salt into water, Salt is the solute.

4. What is a Saturated solution?

Ans:- A saturated solution is a mixture that contains the maximum possible solute that can dissolve at a given temperature.

9. What is filter?

Ans:- A filter is a tool with tiny, invisible holes that separates solid pieces from a liquid (or) a gas.

15. Can a mixture of Salt and Sand can be separated by handpicking?

Ans:- No, a mixture of salt and sand cannot be separated by handpicking. Because both salt and sand are far too small.

DATE: / /
to be picked by up individually by hand

SHORT ANSWER TYPE:

3. What is the principle of Separation of a mixture?

The principle of Separation of mixture is that different substances in a mixture has different physical or chemical properties.

Based on particle size, Boiling point of substance, solubility, Density, sublimation, Magnetic properties of substance, we can separate the substance from mixture.

7. How will you separate a mixture of Sand and Salt?

A mixture of sand and salt can be separated by,
(1) Dissolving
(2) Filtration
(3) Evaporation

Dissolving:

Pour the mixture into a beaker and add water. Stir the liquid thoroughly. The salt will completely dissolve, the sand will just sit at the bottom.

Filtration:

Filter the mixture using filter paper, the sand (residue) remains on the filter paper while the salt solution (filtrate) passes through the filter paper. This filtrate will be collected separately in a container.

Evaporation:

Now, heat the salt solution. The water evaporates, leaving salt crystals behind.

12. After rain

9. Explain the method by which sedimentation can be made faster.

Ans:- * In loading a small amount of alum is added to muddy water

* Alum makes tiny mud particles stick together to form larger and heavier particles

* These heavier particles settle down quickly at the bottom of the container.

* This makes sedimentation happen faster and the clear water can be poured out.

12. After rain, the objects at a distance can be seen more clearly? why?

Ans:- After rain, the dust and smoke particles in the air are washed away. The air becomes clean and clear. So light can travel easily without being blocked. Therefore, distant objects can be seen more clearly.

Long Answer Type :-

6. Explain the methods by which a mixture of sugar, chalk and iron fillings can be separated.

Ans:- A mixture of sugar, chalk powder and iron fillings can be separated by using,

① Magnetic Separation

② Filtration

③ Evaporation

Magnetic Separation :

Pass a magnet over the mixture. The iron fillings will stick to the magnet. Now, the iron filling are removed from the mixture.

Dissolution :

Add water to remaining mixture. Sugar dissolve in water, but chalk does not.

Filtration :

Filter the mixture using a filter paper. The chalk remains as a residue on the filter paper, while the sugar solution passes through.

Evaporation :

Heat the sugar solution gently. The water evaporates, leaving sugar crystals at the bottom.

8. What is the principle of centrifugation? Explain the process of Churning with an example?

Ans: Principle of Centrifugation:

Centrifugation is based on the principle that heavier particles move outward and settles down faster than lighter particles when the mixture is spun rapidly.

Process of Churning:

When curd (or) cream is churned, it spins very fast. The lighter butter (fat) separates and floats on the top, while the heavier buttermilk remains below. The butter is then collected separately.

It is an example of centrifugation.

Class Work Writing

Very Short Answer

~~1~~, 3, 4, 9, ~~5~~

Short Answer Types

3, 7, 9, 12

Long Answer Type

6, 8