

## WORKSHEET

1) What is the main purpose for separation of mixture?

The purpose of separating of mixture are for :

- i) Remove undesirable and harmful substances.
- ii) get useful substances.

2) Handpicking. (Define).

The method of separation can be used when the quantity of a mixture is small and the substance to be separated from a small portion of the mixture and picked out by hand.

3) Winnowing:

The process of separation of grain from husk and hay with help of wind is called winnowing.

Example :- rice is separate from husk.

4) Magnetic Separation :  
This method is used when one of the components of the mixture is magnetic in nature and gets attracted towards a magnet.

5) Sublimation :  
The process in which a solid changes directly into its vapours on heating is called sublimation.

Give one word for the following

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

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

8) The process of transferring the clear liquid after the bottom of the container.  
decantation

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a) The process by which two miscible liquids are separated.  
distillation

## 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 homogeneous 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.

### Short Question

1) What do you understand by?

a) Metalloids :-

These elements show some properties of metals and some properties of non-metals.

They are hard solids. Example: Boron, Silicon, Polonium.

b) Noble gases

These elements do not react chemically with other elements or compounds, so they are known as noble or inert gases.

2) Name the main metal present in:

a) Haemoglobin  
iron

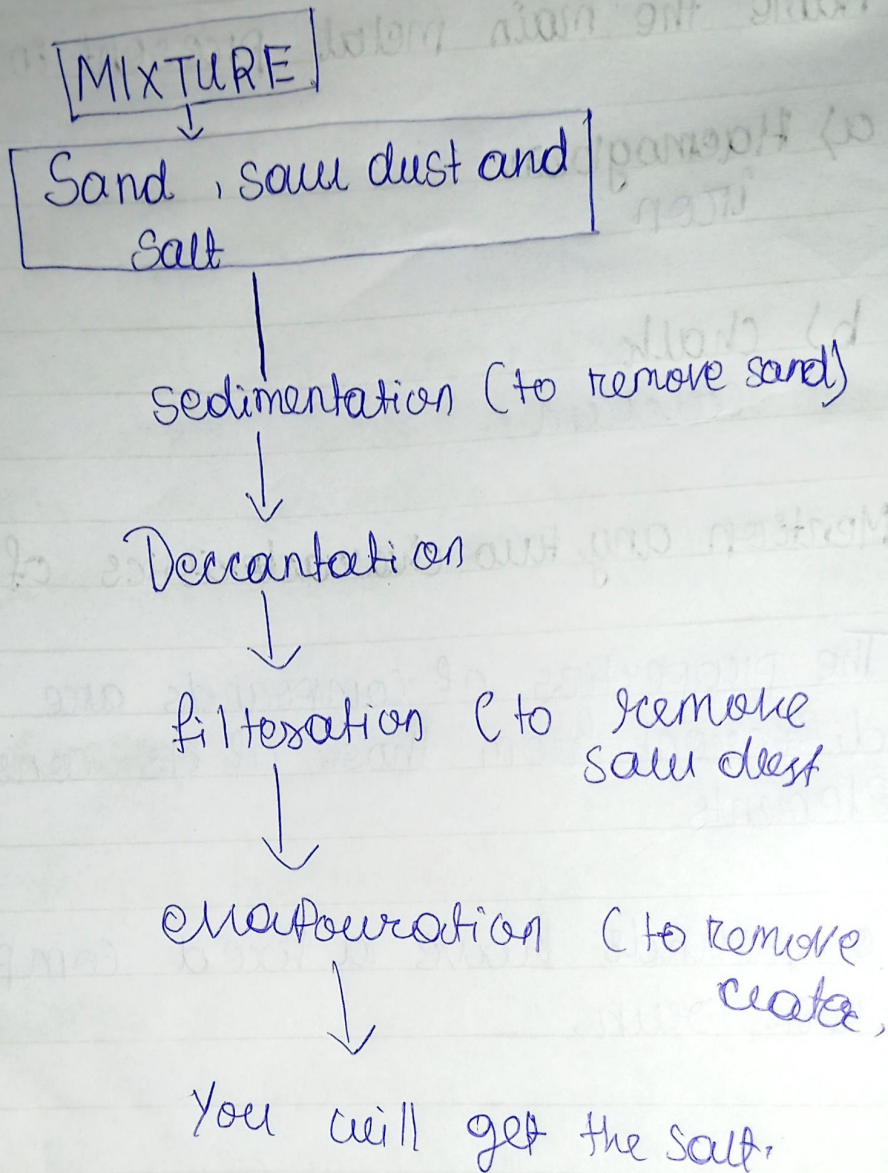
b) chalk  
calcium

3) Mention any two characteristics of compound.

- The properties of compounds are entirely different from those of its constituent elements.
- Compounds have a fixed composition of their own.

## Long Questions

4) Explain with diagram how can we separate a mixture of sand, saw dust and salt.



5. What is crystallisation? Explain by giving an example. Mention how is it a better technique as compared to evaporation.

Crystallisation is a separation and purification method which involves the precipitating of solid crystals from its saturated solution on cooling.

In this process the impure sample is dissolved in minimum amount of suitable solvent. The formed solution is heated to get a saturated solution. On cooling, this saturated solution produces pure crystals of the sample.

The crystallization technique is better than evaporation because the extent of purification with crystallization is very high as it does not require very high-temperature conditions. Hence, there is no need to boil the solvent.