

Hw
21/9/21

Ch 3

elements, compounds and mixtures
worksheet

Date _____

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Very short questions

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

Ans) The main purpose for the separation of mixture is to transform a mixture into two or more distinct products.

2) Define Handpicking.

Ans) The method of separation can be used when the quantity of a mixture is small and substance to be separated forms a small portion of mixture is called handpicking.

3) Define Winnowing.

Ans) The process of separation of grain from husk with the help of wind is called winnowing.

4) Define Magnetic substances.

Ans) The method is used when one of the components of the mixture is magnetic in nature is called magnetic separation.

Q) Define Sublimation

Ans) The process in which a solid changes directly into its vapour on heating is called sublimation

Give one word answer

Q) The solid particles that remain on the filter paper after the filtration. Residue

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

Q) The process of transferring the clear liquid after the solid settles at the bottom of the container. Decantation

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

MCQ

Q) A pure liquid is obtained from a solution by

a) Evaporation

c) Filtration

b) Distillation

d) Crystallisation

2) Components of crude petroleum can be separated by:
 a) Distillation
 c) Filtration
 b) Evaporation
 ✓ d) Fractional distillation

3) Examples of a homogeneous mixture is:
 ✓ a) Tap water
 c) Sand and water
 b) Distilled water
 d) Water and oil

4) In chromatography, the filter paper is:
 ✓ a) Stationary phase
 c) Mixture
 b) Mobile phase
 d) None of the above

5) A set of mixture is:
 ✓ a) Ink, honey, Ice-cream, milk
 c) Milk, brass, silver, honey
 b) Tap water, gold, common salt,
 alloy
 d) Butter, petroleum, tap water,
 iron

Short Question

1) What do you understand by? —
 a) Metalloids.

Ans) Metalloids are those substances which have some properties of metals and some of non-metals.
 Ex - Boron, Silicon

Q) Noble gases.

Ans) Noble gases are those which do not react chemically with other elements or compounds.

Q) Name the main metal present in:

a) Haemoglobin

Ans) The main metal present in Haemoglobin is Iron.

b) Chalk

Ans) The main element present in chalk is calcium.

Q) Mention any two characteristics of compound.

Ans) The two characteristics of compound are :-

i) Compounds have a fixed composition of their own.

ii) Energy is either absorbed or liberated during the formation of a compound.

Long Questions

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

Ans)

Mixture of sawdust, sand and salt

Sawdust + water

+

Sand + water

Salt + water

sedimentation and filtration

Evaporation

- The first process is sedimentation because the sawdust being the heavier particle gets settled at the bottom of the container along with sand.
- The mixture is then separated from sawdust and sand by filtration. After this, we will get a mixture of water and salt.
- This mixture is then separated by using evaporation. During evaporation, the water molecules get evaporated leaving behind only salt particles.

Q) what is crystallization? Explain by giving an example. Explain how it is a better technique as compared to evaporation.

Ans) The process in which slow evaporation of a solution containing more of the solid compound is done, is called crystallization. Water of crystallization is the amount of water molecules which are present in one formula unit of salt. They give the crystals their shape and crystal. Crystallization is better than evaporation, because, during evaporation, some solids decompose on some, like sugar, may get charred on heating to dryness. But during crystallization, we find much pure liquid than evaporation. Crystallization is a better technique as compared to evaporation.