HW

Elements, Compounds and Mixture
Worksheet

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1) Ans. The main purpose of separating the constituents of a mixture are to:
i) Remove undesirable and harmful substances.
ii) Get useful substances
iii) Get completely pure substances for preparing other useful substances.

2) Ans. Hand-picking is the method of separation used when the quantity of mixture is small and the substance to be separated is a small portion of the mixture and of enough size which is picked out by hand. Ex - separating stones from rice.

3) Ans. The process of separating ~~of grain from husk~~, heavier and lighter particles with the help of wind is called winnowing. Ex - separating grain from husk and hay.

4) Ans. The method of separating magnetic component from a non magnetic components using a magnet is called magnetic separation. Ex - separating iron from sulphur.

5) Ans. The process in which a solid changes directly to its vapours on heating is called sublimation.

6) Ans. Residue

7) Ans. Distillate

8) Ans. Decantation

9) Ans- Fractional distillation

MCQ

1. A pure liquid is obtained from a solution by:
   a) Evaporation
   b) Distillation
   c) Filteration
   d) Crystallisation

2. components of crude petroleum can be separated by:
   a) Distillation
   b) Evaporation
   c) Fiteration
   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, tapwater, iron

Short Question

1a) Ans - Metalloids: Elements which show some properties of metals and some properties of non metals are called metalloids. Examples- boron, silicon, antimony, etc.

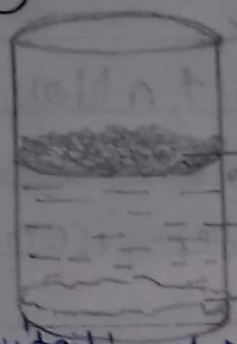
b) Ans Noble gases: The elements which do not react chemically with other elements or compounds and are found in air are called inert or noble gases. Examples- helium, neon, argon, krypton, xenon and radon.

2. a) Iron
b) Calcium

3. Ans. Two important 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 question

Ans- ①

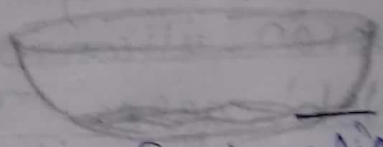


Gravitational Method

②

Filtration

③



Evaporation

The mixture is taken in a glass beaker and water is added to it. The beaker is then allowed to stand undisturbed for sometime. Salt dissolves in water, forming a salt solution. Sawdust being lighter floats on the surface of water while sand being heavier settles down. Now salt solution along with sawdust is decanted slowly on the filter paper fixed in a funnel such that sand is left in the beaker as sediment. Salt solution passes through the filter paper while sawdust remains on it as residue. The salt

solution is evaporated to get salt from the water. In this way the component get separated.

b) Ans Crystallisation is a process in which slow evaporation of a solution containing more of the solid component is done. Example Pure sugar is obtained from its solution in water by the process of crystallisation. At first the sugar solution is heated to evaporate water at a faster speed. When very less of water is left, the solution is cooled on cooling the sugar dissolved in it starts spreading out in the form of crystals. This technique is better than evaporation because water can be collected but in evaporation water is not collected.