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# Worksheet

## Elements, Compounds and Mixtures

1) The purpose of separation of mixture into its constituent are:

(i) remove undesirable and harmful substances

(ii) get useful substances

(iii) get completely pure substances for preparing other useful substances.

2) Handpicking is a method of separation when quantity of a mixture is small and the substance to be separated forms a small portion of a mixture. The substances which are separated must have large in size to be recognised by naked eyes and picked out by hand. For ex- small stones are separated from rice, pulses and spices.

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

4) Magnetic separation is used when one of the components of the mixture is magnetic in nature. For ex- the mixture of iron fillings and sulphur can be separated by this method.

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

6) residue

7) distillate

8) Decantation

9) Fractional distillation

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1) b). Distillation

2) d). Fractional Distillation

3) a). Tap water

4) a). stationary phase

5) a). Ink, honey, icecream, milk

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# Short Questions

1) a) Metalloids: These elements show some properties of metals and some properties of non metals. ~~For ex~~ They are hard solides. ex- Boron, silicon etc.

b) Noble gasses: These elements don't react chemically with other elements or compounds, so they are known as noble or inert gasses. They are found in air, in traces. They are only six in number - helium, neon, argon, krypton, xenon and radon.

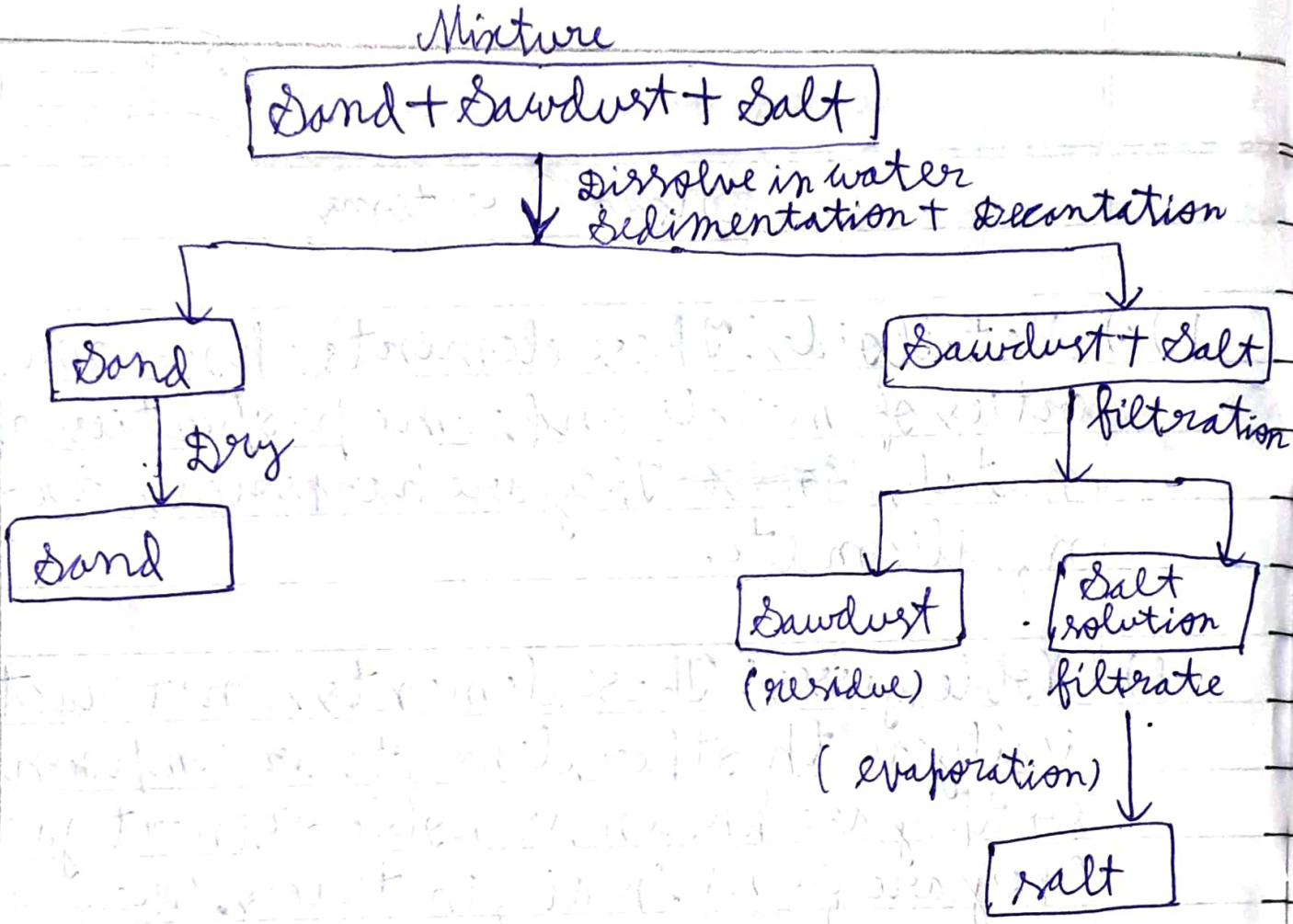
2) a) iron

b) calcium

3) Two characteristics of a compound are:

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

4)




5) Crystallization is a process in which slow evaporation of a solution containing more of the solid component is done. Ex - Pure sugar is obtained from its solution in water by the process of crystallization. It is a process that separates a pure solid in the form of its crystals from a solution. Crystallization is better than evaporation because during evaporation some solids decompose or some, like sugar, may get charred on heating to dryness. Some impurities may remain dissolved in the solution even after filtration which on evaporation contaminates the solid. Impure solids are obtained by evaporation and are further purified by cryst

allization. Ex - salt obtained from the sea is further purified by this method. In some cases, ex - sugar crystals can't be obtained by simple evaporation technique because sugar gets charred on heating to dryness. In such cases, the crystallization technique is applied.