

Level-1

1. The compound rust is hydrated oxide of

Ans- c) Iron

2. When sugar is heated its colour changes into

Ans- c) Black

3. Which of the following is an example of homogeneous mixture

Ans- a) Tap water

4. A pure liquid can be obtained from a solution by

Ans- b) Distillation

One-word

1) The solid particle that remains on the filter paper - Residue

2) The liquid which evaporates and then condenses during the process of distillation - distillate

3) The process of transferring the clear liquid after solid settles at the bottom of the container - Decantation

4) The process by which two miscible liquids are separated - Fractional distillation

Level-2

1. Ans Matter is anything that has mass occupies space and can be perceived by our senses.

2. Ans - Chemical reaction like burning of candle, burning of paper take place in the presence of heat.

3. Ans - Changes like burning of buildings is a undesirable change.

4. Ans - When a candle is lit, the wax melts and turns into liquid state. As some of the molten wax drops on the surface, it solidifies again. Therefore, this is a physical change. Simultaneously, most of the molten wax rises up the wick, turns into vapour and burns with the flame. Two new substances are formed: water and vapour and carbon dioxide. The candle becomes smaller and smaller. This is a chemical change.

B. Ans - The purpose of separating the constituents of a mixture are to

- i) Remove undesirable or harmful substances.
- ii) Get useful substances and
- iii) Get completely pure substances for preparing other useful substances.

6. Ans- The process in which a solid changes ~~to~~ directly into its vapours on heating is called sublimation.

7. Ans- Centrifugation is used to separate ~~the~~ cream from milk and in washing machines to squeeze out water from wet clothes.

8. Ans- Magnetic separation is used if one of the component is magnetic in nature could get attracted by the magnet leaving the rest of the mixture.

9. Ans- In evaporation, after heating the solution, only the solid particles can be collected but in distillation, after heating and cooling both the solid and ~~the~~ liquid components can be separated in different containers.

10. Ans- The need for separation of substances are :-

- i) remove undesirable and harmful substances
- ii) get useful substances
- iii) get completely pure substances or to prepare other useful substances.

11. Ans- Characteristic properties of pure substances are :-

- Pure substances are homogenous in nature containing one type of atom or molecule.

- They have a definite set of properties like melting point, boiling point, density etc.

12. Ans- To separate a mixture of salt, chalk powder and powdered camphor first heat the mixture to separate the camphor particles from the rest of the components. ~~But~~ some water should be added to the mixture so that the salt dissolves with water and chalk is left behind. Then the process of filtration is done to separate chalk powder from the solution. At last evaporation is done to get the salt back from the solution.

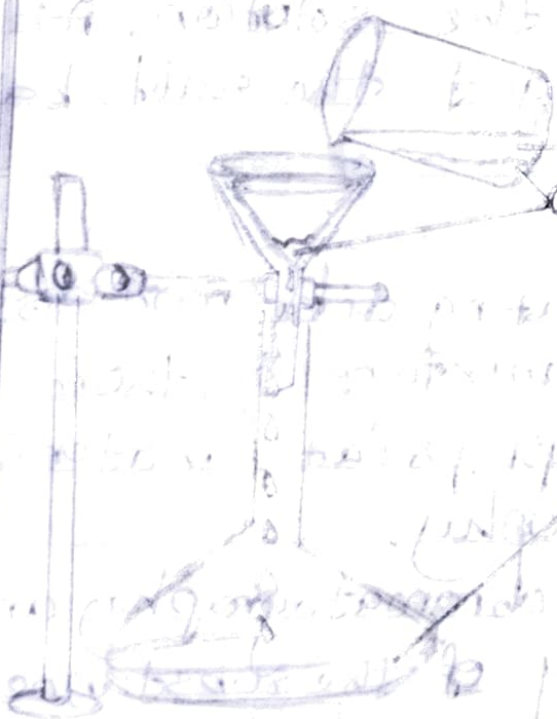
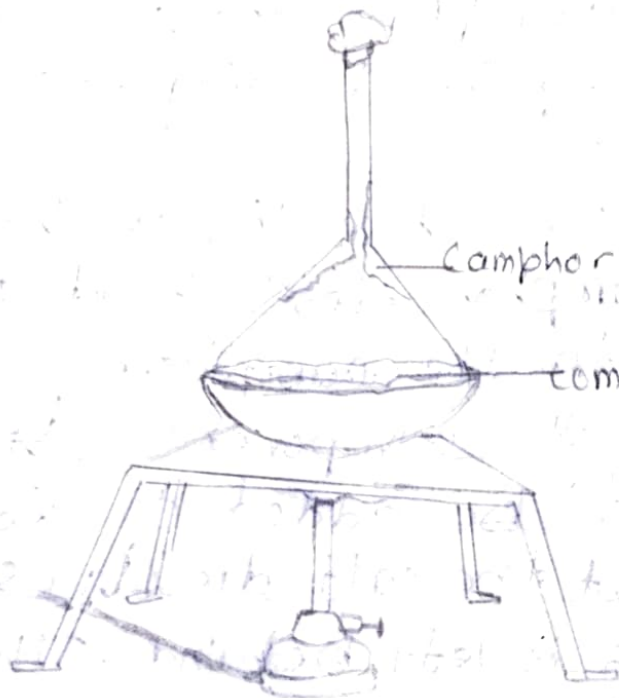
Level-3

13. Ans- The process of separating different dissolved constituents of a mixture by their absorption on an appropriate material is called chromatography.

2 Major advantages of chromatography are :-

- A very small quantity of the substance can be separated.
 - Components with very small, similar physical and chemical properties can be separated.
- 2 Major uses of chromatography are :-

2. Ans.



Camphor
 common salt and chalk powder
 Sublimation
 salt solution
 Chalk powder
 Filtration
 water vapour
 Evaporation

- to separate pigments from natural colours
- to separate drugs from blood (pathological tests)

2. Ans To separate a mixture of salt, chalk powder and powdered camphor, first heat the mixture to separate the camphor particles from the rest of the components. Some water should be added to the mixture so that the salt dissolves with water but chalk is left behind. Then the process of filtration is done to separate the chalk powder from the solution. At last evaporation is done to get the salt back from the solution.

3. Ans	Evaporation	Boiling
i)	Evaporation is a slow process	i) Boiling is a fast process
ii)	Evaporation takes place from the surface of the liquid.	ii) Boiling takes place from all parts of the liquid
iii)	Evaporation takes place at all temperatures below its boiling points.	iii) Boiling takes place at a fixed temperature on heating, i.e. at its boiling point.

4. Ans.

Atom

Molecule

i) Atom is the smallest unit of an element.

ii) It may or may not exist independently.

iii) Atom exists as a single unit.

For example, an atom of hydrogen is written as 'H'.

i) Molecule is the smallest unit of an element or a compound.

ii) It always exists independently.

iii) A molecule is formed by the combination of two atoms.

For example 'H₂' stands for Hydrogen molecule.