II. SHORT ANSWER TYPE QUESTIONS

l. What is mixture?
Ans. When two or more than two substances are mixed together in any ratio then it is called a mixture.

2. Write various methods of separation of components from their mixture.
Ans.
(i) Handpicking
(ii) Threshing
(iii) Winnowing
(iv) Sedimentation
(v) Decantation
(vi) Filtration
(vii) Evaporation
(viii) Condensation

3. Define the term handpicking.
Ans. The process used to separate slightly larger particles from a mixture by hand is called handpicking. For example: Stone pieces can be separated from wheat or rice by handpicking.

4. What do you mean by threshing? Where is it used?
Ans. Threshing is a process in which we separate grain from stalks. This process is used by farmer to separate gram, wheat, rice, mustard seeds in his field.

5. Write three methods of separation.
Ans. Handpicking, threshing and winnowing.

6. How will you separate oil and water from their mixture?
Ans. Oil, being lighter than water, will float on it. Two distinct layers are formed and slowly oil is allowed to flow into another container and is separated from water. Separating funnel can also be used to separate the two.

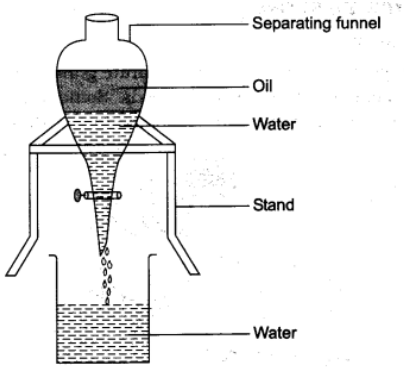

Fig. 5.13 Separation of liquids by separating funnel

7. What is evaporation?
Ans. The process of conversion of water into vapour is called evaporation. This process takes place continuously where water is present. Common salt from sea water is obtained using this method.

8. Define winnowing.

Ans. The process is used to separate components from a mixture in which one component is heavier or lighter than other is called winnowing. Winnowing is done with the help of wind or by blowing air.

9. What do you mean by sieving? Give an example.
Ans. Sieving allows the fine flour particles to pass through the holes of the sieve while the bigger particles or impurities remain on the sieve. For example, in a flour mill, impurities like husk and stones are removed from wheat before grinding it.

10. Match the column:

Separation process	*Purpose for which we do the separation*	*What do we do with the separated components?*
(1) Separate stones from rice	(*a*) To separate two different but useful components.	(*i*) We throw away the solid component.
(2) Churning milk to obtain butter	(*b*) To remove non-useful components.	(*ii*) We throw away the impurities.
(3) Separate tea leaves	(*c*) To remove impurities or harmful components.	(*iii*) We use both the components.

Ans. (1)–(*c*)–(*ii*), (2)–(*a*)–(*iii*), (3)–(*b*)–(*i*)

III. LONG ANSWER TYPE QUESTIONS

I. What is threshing?
Ans. Threshing is a process that is used to separate grain from stalks. In this process the stalks are beaten to free the grain seeds. Sometimes threshing is done with the help of bullocks. Machines are also used to thresh large quantities of grain.

Fig. 5.14 Threshing

2. Describe the method to obtain salt from sea water.
Ans. Sea water contains many salts mixed in it. One of them is common salt, when sea water is allowed to stand in shallow pits, water gets evaporated by sunlight and slowly turns into water vapour. In a few days, the water evaporates completely leaving behind the solid salts. Common salt is then obtained from this mixture of salts by further purification.

3. What is decantation?
Ans. Decantation is a process, of separation of insoluble solids from liquid. The suspension of solid particles in liquid is allowed to stand for some time. The solid particles then settle down at the bottom of the container and clean water goes up. Without disturbing the settled particles tlje clean water is transferred into other container.

4. Where is decantation used? Give two examples.
Ans. (i) Decantation is used to separate insoluble solids or liquid from liquid. Rain water is a mixture of mud and water. It is purified by decantation.
(ii) Oil and water also get separated by this method because oil floats up.

5. How will you prepare cheese (paneer)?
Ans. For making paneer, a few drops of lemon juice sire added to milk as it boils. This gives a mixture of particles of solid paneer and liquid. The psmeer is then sepsirated by filtering the mixture through a fine cloth or strainer.

6. Explain the method that can be used for separating the following mixture:
(i) Sand and husk
(ii) Wheat, sugar and stsilk
(iii) Water and petrol
(iv) Rice and salt
(v) Ssind sind salt
Ans. (i) Mixture of sand smd husk: Ssind and husk can be separated by the method of winnowing.
(ii) Mixture of wheat, sugsir sind stalk: For separating stsilk from the mixture we should follow the winnowing method because stsilk is lighter thsin other two components smd get sepsirated. Wheat smd sugar csm be separated by sieving because they are in different sizes.
(iii) Mixture of water smd petrol: Water does not dissolve in petrol. So, it csm be sepsirated by the use of separating funnel.
(iv) Mixture of rice smd salt: Rice and ssilt can be sepsirated by sieving.
(v) Mixture of sand and ssdt: Ssind smd ssdt is mixed with water, ssdt dissolves in water and sand can be separated solution by sedimentation and decantation followed by filtration. After that using evaporation common salt is separated.

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