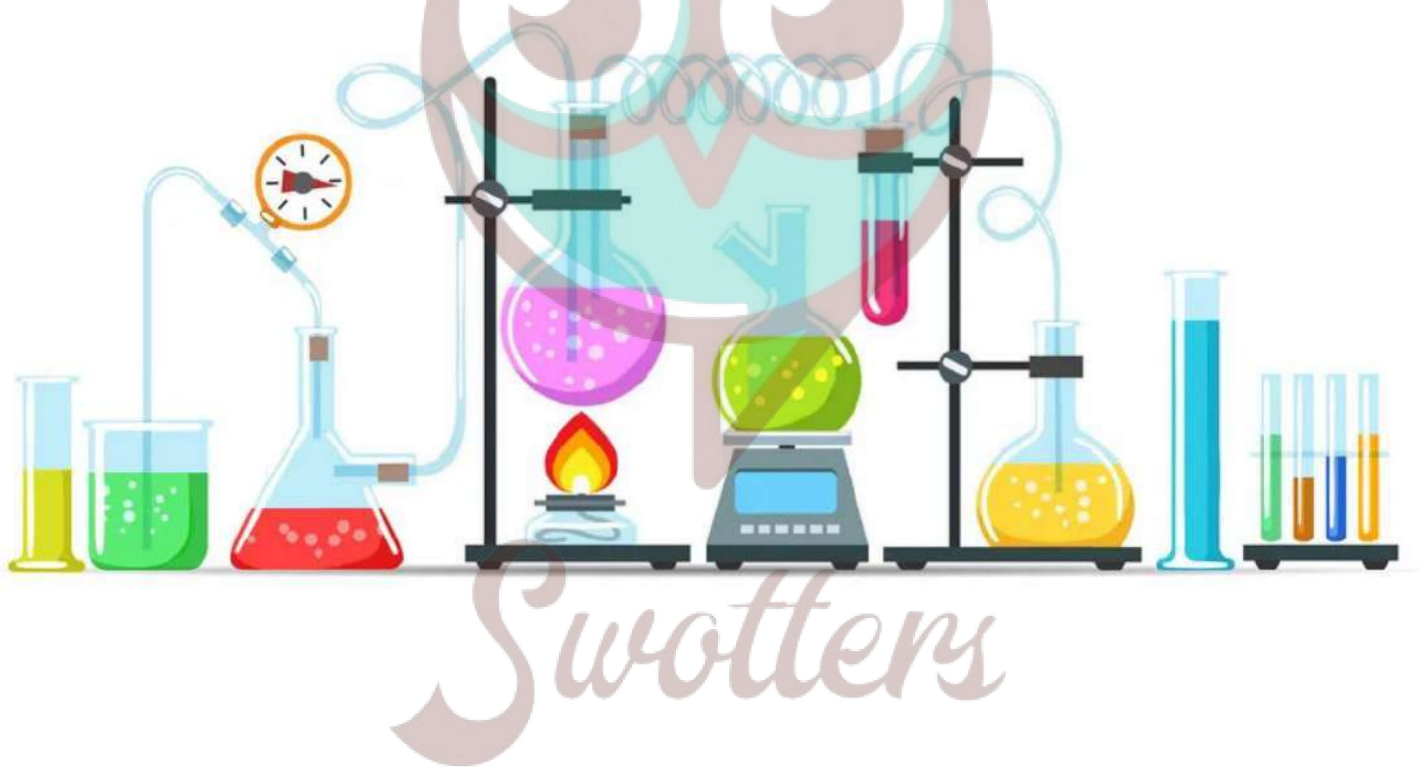


SCIENCE

Chapter 6: Changes Around Us



Important Questions

Multiple Choice Questions:

Question 1. A mixture of iodine and sand can be separated by:

- (a) Decantation
- (b) Centrifugation
- (c) Filtration
- (d) Sublimation

Question 2. A mixture of tea leaves and iron filling can be separated by:

- (a) Filtration
- (b) Evaporation
- (c) Separating funnel
- (d) Magnet

Question 3. A mixture of mustard oil and kerosene oil can be separated by:

- (a) Sublimation
- (b) Evaporation
- (c) Separating funnel
- (d) Filtration

Question 4. Insects are separated from wheat by:

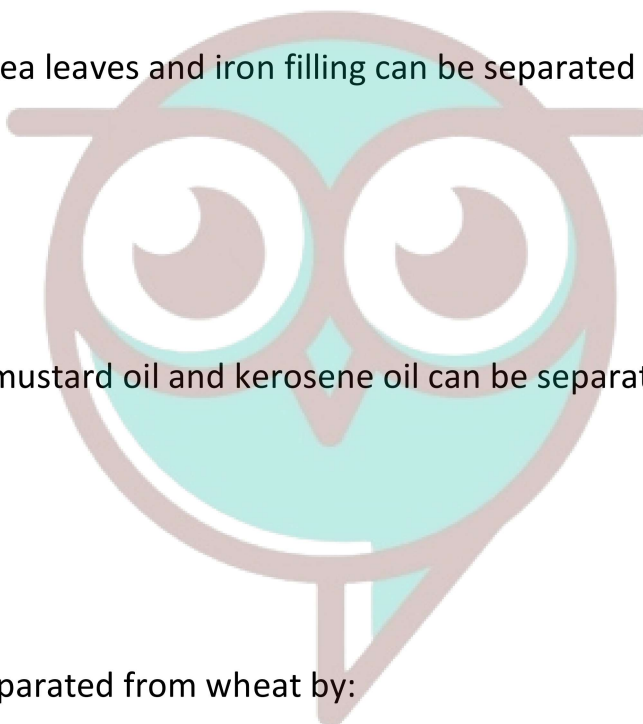
- (a) Hand picking
- (b) Sieving
- (c) Magnet
- (d) None of these

Question 5. Larger quantity of salt can be dissolved in water by:

- (a) Heating
- (b) Cooling
- (c) Icing
- (d) None of these

Question 6. _____ cannot dissolve any amount of substances:

- (a) Solid
- (b) Water
- (c) Gas



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(d) Vapour

Question 7. To separate husk from grains in a field by

(a) Tailor

(b) Grocer

(c) Watchman

(d) Farmers

Question 8. The husk which is, is carried away by the wind and forms a Separate heap at a short distance from the heap of grain,

(a) Heavier

(b) Lighter

(c) Stronger

(d) None of these

Question 9. The grains which are fall vertically down on the ground,

(a) Heavier

(b) Lighter

(c) Stronger

(d) None of these

Question 10. A method of separation used when the components of a mixture are of different sizes is known as:

(a) Separation

(b) Winnowing

(c) Sieving

(d) None of these

Question 11. Water is cleared by the process of loading.

(a) Lemon water

(b) Milky water

(c) Muddy water

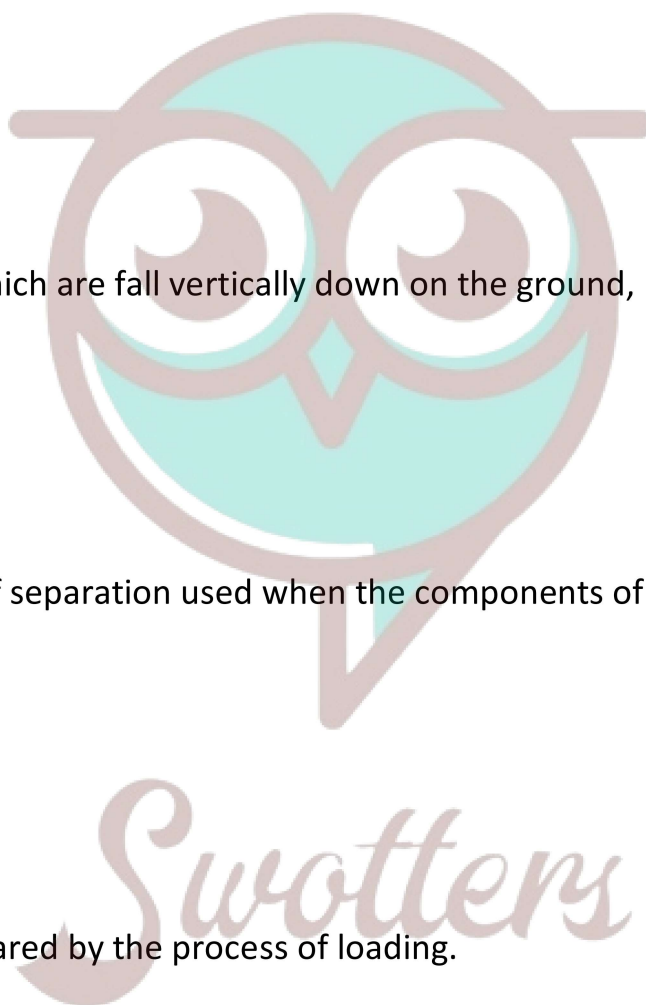
(d) None of these

Question 12. The method to separating seeds of paddy from its stalks is called:

(a) Filtration

(b) Hand-picking

(c) Decantation



(d) Threshing

Question 13. Common salt is then obtained from this mixture of salts by:

(a) Evaporation

(b) Filtration

(c) Purification

(d) None of these

Question 14. Which types of filters are used to purify drinking water ?

(a) Electric water filters

(b) Common water filter

(c) Pure it filter

(d) None of these

Question 15. Give an example of where filtration is used at home.

(a) Mustard oil and water can be separated by using filtration

(b) Husk from rice is separated by filtration

(c) Paneer from milk is separated by filtration

(d) All of these

Very Short Question:

1. What is strainer?
2. Name the method used to separate cream from curd.
3. How will you separate mango from a mixture of mango and apple?
4. You are given a mixture of salt and sand. Can you separate them by picking?
5. Name the method used to separate the pieces of stone from grain.
6. How can you separate grains from stalk?
7. What types of material can we separate by using handpicking?
8. Name the other methods used to separate solid materials of different size.
9. Name the process used to separate heavier and lighter components of a mixture.
10. Can the above stated method be used if both the components have same weight?

Short Questions:

1. What is mixture?
2. Write various methods of separation of components from their mixture.
3. Define the term handpicking.
4. What do you mean by threshing? Where is it used?

5. Write three methods of separation.
6. How will you separate oil and water from their mixture?
7. What is evaporation?
8. Define winnowing.

Long Questions:

1. What is threshing?
2. Describe the method to obtain salt from sea water.
3. What is decantation?
4. Where is decantation used? Give two examples.
5. How will you prepare cheese (paneer)?
6. Explain the method that can be used for separating the following mixture:

Answer Key-

Multiple Choice Answers:

1. (d) Sublimation
2. (d) Magnet
3. (c) Separating funnel
4. (a) Hand picking
5. (a) Heating
6. (b) Water
7. (d) Farmers
8. (b) Lighter
9. (a) Heavier
10. (c) Sieving
11. (c) Muddy water
12. (d) Threshing
13. (c) Purification
14. (a) Electric water filters
15. (c) Paneer from milk is separated by filtration

Very Short Answers:

1. Answer: Strainer is a kind of sieve which is used to separate a liquid from solid.
2. Answer: Centrifugation.

3. Answer: By picking.
4. Answer: No, we cannot separate them by picking.
5. Answer: Handpicking.
6. Answer: We separate grains from stalk by threshing.
7. Answer: The materials having different size and colour can be separated by handpicking.
8. Answer: Sieving.
9. Answer: Winnowing.
10. Answer: No, this method cannot be used.

Short Answer:

1. Answer: When two or more than two substances are mixed together in any ratio then it is called a mixture.
2. Answer:
 - a. Handpicking
 - b. Threshing
 - c. Winnowing
 - d. Sedimentation
 - e. Decantation
 - f. Filtration
 - g. Evaporation
 - h. Condensation
3. Answer: 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. Answer: 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. Answer: Handpicking, threshing and winnowing.
6. Answer: 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.

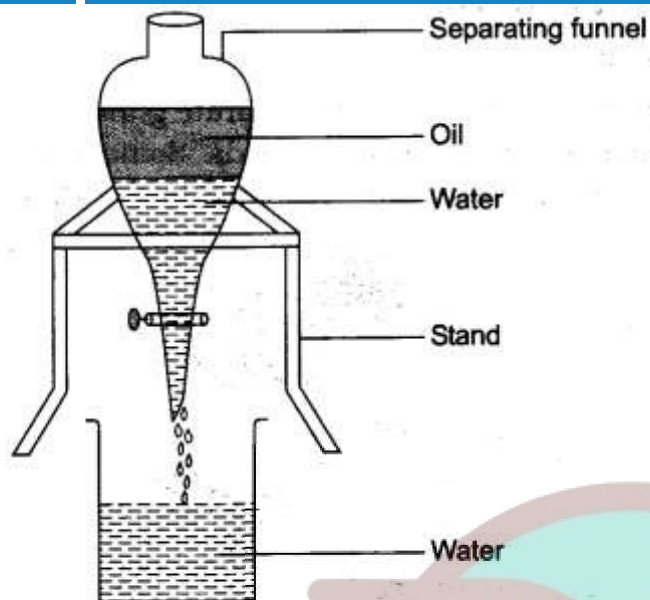


Fig. 5.13 Separation of liquids by separating funnel

7. Answer: 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. Answer: 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.

Long Answer:

1. Answer: 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.



2. Answer: 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. Answer: 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 the clean water is transferred into other container.
4. Answer:
- (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. Answer: For making paneer, a few drops of lemon juice are added to milk as it boils. This gives a mixture of particles of solid paneer and liquid. The paneer is then separated by filtering the mixture through a fine cloth or strainer.
6. Answer:
- (i) **Mixture of sand and husk:** Sand and husk can be separated by the method of winnowing.
 - (ii) **Mixture of wheat, sugar and stalk:** For separating stalk from the mixture we should follow the winnowing method because stalk is lighter than other two components and get separated. Wheat and sugar can be separated by sieving because they are in different sizes.
 - (iii) **Mixture of water and petrol:** Water does not dissolve in petrol. So, it can be separated by the use of separating funnel.
 - (iv) **Mixture of rice and salt:** Rice and salt can be separated by sieving.
 - (v) **Mixture of sand and salt:** Sand and salt is mixed with water, salt 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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