

Class: VI  
Subject: Chemistry  
Topic: Separation of substances  
No. of Questions: 20

1. How is cream obtained from milk?

Ans: When milk is churned or rotated at a high speed, cream gets separated from milk.

2. Why do we need to separate different components of a mixture? Give two examples.

Ans: Different components of a mixture are separated in order to either separate the unrequired components broken grains, etc. thus, grain is separated from these impurities to make it edible. Similarly, after preparing tea, we strain it to remove the used tea leaves from tea.

3. Paheli bought some vegetables such as French beans, lady's finger, green chillies, brinjals and potatoes all mixed in a bag. Which of the following methods of separation would be most appropriate for her to separate them?

- A. Winnowing
- B. Sieving
- C. Threshing
- D. Hand picking

Ans. (d)

4. You are given a mixture of salt & sand, how would you separate them?

Ans: For separating given mixture of salt & sand we dissolve the given mixture in water resulting in settling of sand particles & salt get dissolved. Then we apply the method of filtration or decantation. Afterwards salt solution is evaporated to obtain salt.

5. How will you separate husk or dirt particles from a given sample of pulses before cooking?

Ans: The dirt particles that are present in the pulses are removed by washing the latter with water. Being heavier the pulses settle down, while the dirt particles being lighter keep floating in water. This process is called sedimentation. The dirty water can be removed by the method of decantation, leaving the pulses at the bottom.

6. Boojho's grandmother is suffering from diabetes. Her doctor advised her to take 'Lassi' with less fat content which of the following methods would be most appropriate for boojho to prepare it?
- A. Filtration
  - B. Decantation
  - C. Churning
  - D. Winnowing

Ans (c)

7. Explain the method of abstaining common salt from sea water.

Ans: Sea water is collected in shallow pits dug on the sea shore. The heat of sun evaporates water. When enough water has evaporated the solution becomes concentrated, then the salt begins to crystallize.

8. What is sieving? Where is it used?

Ans: Sieving is the method of separation of fine particles from bigger particles by allowing the finer particles to pass through the holes of a sieve, leaving the bigger particles in the sieve itself. It is generally used in homes to separate flour from impurities such as pieces of stone, stalk, and husk. It is also used at construction sites to separate sand from small stones.

9. Which of the following mixtures would you be able to separate using the method of filtration?
- A. Oil in water
  - B. Cornflakes in milk
  - C. Salt in water
  - D. Sugar in milk

Ans. (b)

10. Differentiate between hand picking & winnowing.

Ans . Hand picking: when the constituents of the mixture are big in size & visibly different then hand picking is used. For example: separating stones from rice.

Winnowing: when one of the constituents is lighter & the other is heavier, then winnowing is employed. For example: shaff from grain.

11. Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?

Ans: Yes, it is possible to separate a mixture are big in size & visibly different then hand picking is used. For example: separating stones from rice.

Winnowing: when one of the constituents is lighter & the other is heavier, then winnowing is employed. For example: shaff from grain.

12. You might have observed the preparation of ghee from butter and cream at home. Which method(s) can be used to separate ghee from the residue?

(i) Evaporation

(ii) Decantation

(iii) Filtration

(iv) Churning

Which of the following combination is the correct answer?

A. (i) and (ii)

B. (ii) and (iii)

C. (ii) and (iv)

D. (iv) only

Ans (b)

13. Why filtration is preferred over decantation?

Ans: Sometimes in decantation the liquid is not completely separated from an in soluble liquid then we apply the method of decantation.

14. How would you obtain clear water from a sample of muddy water?

Ans: Clear water can be obtained from a sample of muddy water by the method of filtration, in this method, the sample of muddy water is poured through a cloth having fine pores or through a filter paper water will pass through the filtering medium, leaving behind the mud.

15. In an activity, a teacher dissolved a small amount of solid copper sulphate in a tumbler half filled with which method would you use to get back solid copper sulphate from the solution?

A. decantation

B. Evaporation

C. Sedimentation

D. Condensation

Ans (b)

16. Why do we employ the method of loading sometimes after sedimentation & decantation?

Ans: Loading helps sedimentation. Sometimes very fine solid particles do not sink to the bottom, they remain suspended in water so these fine particles can be separated from loading.

17. During summer, Boohoo carries water in a transparent plastic bottle to his school. One day he left his bottle in the school . the bottle still had some water left in it. The following day, he observed some water droplets on the bottle. These droplets of water were formed due to

- A. Boiling and condensation.
- B. Evaporation and saturation
- C. Evaporation and condensation.
- D. Condensation and saturation.

Ans (c)

18. Identify the following as pure substances & mixtures :  
Silver, salt, Sharbat & jam.

Ans. Silver      pure substance

      Salt          Pure substance

      Sharbat     mixture

      Jam          mixture

19. Paheli asked for a glass of water from boojho. He gave her a glass of ice cold water. Paheli observed some water droplets on the outer surface of the glass and asked boojho how these droplets of water were formed? Which of the following should be boojho's answer?

- A. Evaporation of water from the glass.
- B. Water that seeped out from the glass.
- C. Evaporation of atmospheric water vapour.
- D. Condensation of atmospheric water vapour.

Ans (d)

20. A boy has got a mixture containing salt, tea leaves & oil, how will he separate the components?

Ans: First he will sieve the solution to obtain tea leaves. Then the solution would be left with salt & oil, now he will use distillation to separate salt & oil, on heating oil will go from one beaker to another & then decantation is employed to separate oil from mixture.

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