Chapter 5. Separation Of Substances

Very Short Q&A

Q1: Name any two methods used for separation of substances.

Ans: Threshing and filtration

Q2: Which method is used to separate stones from grains?

Ans: Handpicking

Q3: Handpicking can be used only when quantity of impurities is NOT very large. (TRUE/FALSE)

Ans: True

Q4: How does the farmer separate grains seeds from bundles of stalk?

Ans: By threshing farmer can separate grain seeds from bundles of stalk.

Q5: Which method is used to separate heavier and lighter component of a mixture by wind or blowing air?

Ans: Winnowing

Q6: Husk from wheat can be separated by _____.

Ans: Handpicking

Q7: The method in which stalks are beaten to free the grain seeds is called_____.

Ans: Threshing

Q8: Heavier and lighter components of a mixture can be separated by winnowing. (TRUE/FALSE)

Ans: True

Q9: The method by which impurities and bran can be removed from the flour is _____.

Ans: Sieving

Q10: Sieving is used when the component of mixture have different sizes.(TRUE/FALSE)

Ans: True

Q11: When heavier component of a mixture settles after water is added to it, it is called_____.

Ans: Sedimentation

Q12: What is decantation?

Ans: The process in which water is removed when heavier component of mixture settles, it is called decantation.

Q13: The two liquids that do not mix with each other can be separated by_____.

Ans: Decantation.

Q14: Which method of separating tea leaves from prepared tea is better: filtration or decantation?

Ans: Filtration

Q15: What is evaporation?

Ans: The process of conversion of water into its vapour is called evaporation.

Q16: The method of filtration is also used in the process of preparing cottage cheese in our homes.(TRUE/FALSE)

Ans: True

Q17: Salt comes from sea water.(TRUE/FALSE)

Ans: True

Q18: How can sand be separated from water?

Ans: Sand can be separated from water by sedimentation.

Q19: Evaporation can be used to separate a solid dissolved in liquid.(TRUE/FALSE)

Ans: True

Q20: How can we separate salt from water?

Ans: By evaporation

Q21: Water dissolves different amount of soluble substances in it. (TRUE/FALSE)

Ans: True

Q22: Water drops condensed under a plate that has been used to cover a vessel containing milk that has just been boiled. This is due to _____.

Ans: Condensation.

Q23: More number of substances can be dissolved in a solution by heating it . (TRUE/FALSE)

Ans: TRUE

Q24: Does the water dissolve equal amount of different soluble substances?

Ans: No

Q25: When no more salt can be dissolved in the amount of water taken, the solution is said to be_____.

Ans: Saturated

Q26: We dissolve salt in water. By what way the same amount of water could be made to dissolve more salt before getting saturated?

Ans: On heating the water

Q27: How is a solution prepared?

Ans: A solution is prepared by dissolving a substance in a liquid

Q28: Water dissolves different substances in different amount.(TRUE/FALSE)

Q29: Which of the following is NOT a method of separation of substances:
Threshing, filtration, saturated solution, sedimentation

Ans: Saturated solution

Q30: To separate dust and soil particles from rice, water is added. Then the vessel is tilted to pour out the dirty water. This is an example of _____.

Ans: Sedimentation.

Q31: Oil and water from their mixture can be separated by _____ and _____.

Ans: Sedimentation, decantation.

Q32: What is the sequence of step that must be used to separate constituents in a mixture of salt and camphor :

a. Evaporation
b. Sublimation.
c. distillation
d. Filtration

Ans: b

Q33: The technique that separates a liquid from insoluble solid by carefully pouring off the liquid is called _____.

Ans: Decantation

Q34: Among the following which is the separation technique used to separate a solid-solid mixture:
Filtration, decantation, hand picking

Ans: Handpicking

Q35: If you cannot find a strainer or a clean piece of cloth while making a tea in which you added tea leaves. What method would you like to apply for a cup of tea without leaves?

Ans: Decantation

Q36: Take 3 glasses of water. Add two teaspoon sugar in first glass, four tea spoon sugar in second glass, six tea spoon sugar in third glass. Which one is most saturated:
A) First glass
B) Second glass.
C) Third glass

Ans: C

Q37: Grapes can be separated from the mixture of nuts and grapes by _____.

Ans: Handpicking

Q38: Water and milk are mixed in a glass. This mixture can be separated by filtration. (TRUE/FALSE)

Ans: False

Q39: If a salt is completely dissolved in water, is it possible to separate salt from water by filtration?

Ans: No

Short Q&A

Q1: What is done in threshing? How it can be done?

Ans: In threshing, the stalks are beaten to free the grain seeds. Threshing can be done with the help of bullocks or machines.

Q2: Which type of impurities can be separated by hand picking?

Ans: Hand picking is used to separate slightly large sized impurities. It is used when the quantity of impurities is not very large.

Q3: Why is separating different components of a mixture necessary?

Ans:

a). To separate two different but useful components.
b). To remove impurities or non useful component from a mixture.

Q4: What do you mean by winnowing? Explain with example

Ans: Winnowing is separating the heavier and lighter components of a mixture by wind or by blowing air. For example-separating mixture of saw dust and sand.

Q5: How is sieving use to separate particles of a mixture? Give example.

Ans: Sieving allows the fine particles to pass through the holes of a sieve while bigger impurities remain on sieve. E.g. separating bran from flour.

Q6: What is a saturated solution?

Ans: When no more solute (e.g. Salt) can be dissolved in the amount of solvent (e.g. Water) taken, the solution is said to be saturated solution.

Q7: What happens when steam comes in contact with the metal plate cooled with ice?

Ans: When steam comes in contact with the metal plate cooled with ice, it condenses and forms liquid water.

Q8: What is condensation?

Ans: The process of conversation of water vapour into its liquid form is called condensation.

Q9: By which process salt, sand and water can be separated?

Ans: Salt, sand and water can be separated by decantation, filtration, evaporation followed by condensation.

Q10: What is the difference between evaporation and condensation?

Ans: The process of conversion of water into its vapour is called evaporation.The process of conversation of water vapour into its liquid form is called condensation.

Q11: What is sedimentation?

Ans: When the heavier component of a mixture settles after water is added to it, the process is called sedimentation

Q12: Write the name of method for separating-
a) Salt from salt water solution.
b) Wheat from mixture of wheat and rice.

Ans:

a). Evaporation
b). handpicking.

Q13: Which of the following is true :
a) Flour is sieved to separate impurities.
b) Threshing is used to separate grains from stalk.
c) Winnowing is used to separate component of same weight.

Ans:

a) True b) true c) false.

Long Q&A

Q1: How is common salt obtained from sea?

Ans: Sea water contains many salts mixed in it. When sea water is allowed to stand in shallow pits, water gets heated by sunlight and slowly turns into water vapour, through evaporation. In few days water is evaporated completely leaving behind solid salts .common salt is obtained from mixture of salts by further purification.