



**INDIAN SCHOOL AL WADI AL KABIR**

<b>Class : VI</b>	<b>Department: SCIENCE 2020-2021</b>	<b>Date of completion : 30. 06.2020</b>
<b>TEXTBOOK Q&amp;A</b>	<b>CHAPTER 5 – SEPARATION OF SUBSTANCES</b>	<b>Note: A4 FILE FORMAT</b>
<b>NAME OF THE STUDENT</b>	<b>CLASS &amp; SEC:</b>	<b>ROLL NO.</b>

**Q 1. Why do we need to separate different components of a mixture? Give two examples.**

*Ans.* Components of a mixture should be separated because

i) To remove impurities or harmful components

Example: remove stones from rice before cooking.

ii) To remove non-useful components

Example: tea leaves from cup of tea

iii) To separate two different, but useful components

Example: butter can be obtained from curd by churning it.

**Q 2. What is winnowing? Where is it used?**

*Ans.* Winnowing is used to separate heavier components from the lighter components by using wind. It is used for separating grains from husk.

**Q 3. How will you separate husk or dirt particles from a given sample of pulses before Cooking?**

*Ans.* Pulses are washed before cooking. When water is added to it, the impurities like husk or dirt particles go into water and becomes muddy. Pulses settles at the bottom of the vessel (sedimentation). The dirty water is removed by decantation.

**Q. 4. What is sieving? Where is it used?**

Ans. Sieving is used for separating components of a mixture on the basis of their particle size. Sieve is used at home to separate bran from wheat flour.

**Q. 5. How will you separate sand and water from their mixture?**

Ans. Mix sand in water and leave the mixture, undisturbed for some time. After sometime, it is observed that the heavier particles (sand) settle at the bottom of the container, this is called sedimentation. The clear water (supernatant) above the sediment is poured out into another container without disturbing the sediment, which is called decantation. Thus by separation and decantation methods we can separate sand and water from their mixture.

**Q. 6. Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?**

Ans. Sugar and wheat flour can be separated by sieving method. The mixture is passed through the sieve, sugar being larger than wheat flour are retained on the sieve, while wheat flour passes through the sieve and gets collected on the dish kept below.

**Q. 7. How would you obtain clear water from a sample of muddy water?**

Clear water can be obtained from muddy water by the process of filtration. In this process the sample is passed through the filter paper placed on the funnel. Fine pores in the filter paper allows only the liquid to pass through and retains the solid particles. Clear water gets collected in the beaker, kept below the funnel.

**Q. 8. Fill up the blanks**

- (a) The method of separating seeds of paddy from its stalks is called threshing.
- (b) When milk, cooled after boiling, is poured onto a piece of cloth the cream (*malai*) is left behind on it. This process of separating cream from milk is an example of filtration.
- (c) Salt is obtained from seawater by the process of evaporation.
- (d) Impurities settled at the bottom when muddy water was kept overnight in a bucket. The clear water was then poured off from the top. The process of separation used in this example is called decantation.

Q. 9. True or false?

- (a) A mixture of milk and water can be separated by filtration. (False)
- (b) A mixture of powdered salt and sugar can be separated by the process of winnowing. (False)
- (c) Separation of sugar from tea can be done with filtration. (False)
- (d) Grain and husk can be separated with the process of decantation. (False)

Q. 10. Lemonade is prepared by mixing lemon juice and sugar in water. You wish to add ice to cool it. Should you add ice to the lemonade before or after dissolving sugar? In which case would it be possible to dissolve more sugar?

Sugar should be added before adding ice. The solubility of substance (sugar) decreases with decrease in temperature.

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