

## Long Answer Questions

**Q.1. Both Sarika and Mohan were asked to make salt solution. Sarika was given a teaspoonful of salt and half a glass of water, whereas Mohan was given twenty teaspoonful of salt and half a glass of water.** [NCERT Exemplar]

**(i)** How would they make salt solutions?

**Ans.** They would mix salt with water to make salt solution.

**(ii)** Who would be able to prepare saturated solution?

**Ans.** Mohan's solution would be saturated because in Mohan's case some salt would remain undissolved and settle at the bottom of the glass.

**Q.2. Paheli was feeling thirsty but there was only a pot of water at home which was muddy and unfit for drinking. How do you think Paheli would have made this water fit for drinking if the following materials were available to her.**

Alum, tub, muslin cloth, gas stove, thread, pan and lid [NCERT Exemplar]

**Ans.**

- i. Filtration using muslin cloth.
- ii. Swirl with alum and leave water undisturbed for some time.
- iii. Decantation.
- iv. Boil for 10 minutes in covered pan.
- v. Cool, filter and now it is fit for drinking.

**Q.3. Read the story titled "WISE FARMER" and tick the correct option to complete the story.**

**A farmer was**

- i. sad/happy to see his healthy wheat crop ready for harvest. He harvested the crops and left it under the
- ii. Sun/rain to dry the stalks. To separate the seeds from the bundles of the stalk he
- iii. handpicked/threshed them. After gathering the seed grains, he wanted to separate the stones and husk from it. His wife
- iv. winnowed/threshed them to separate the husk and later
- v. sieved/handpicked to remove stones from it. She ground the wheat grains and
- vi. sieved/filtered the flour. The wise farmer and his wife got a good price for the flour.

**Ans.**

- i. happy
- ii. Sun

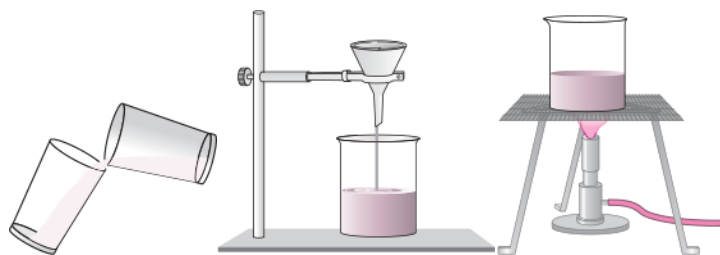
- iii. threshed
- iv. winnowed
- v. handpicked
- vi. sieved

They got a good price as they used appropriate methods of separation to get good quality of flour.

**Q.4. You are provided with a mixture of salt, sand, oil and water. Write the steps involved for the separation of salt, sand and oil from the mixture by giving an activity along with the diagram.**

**Ans.**

- i. Oil being insoluble in water forms a separate layer. The top layer of oil is decanted to separate it from the
- ii. The mixture is then filtered with the help of a filter paper and funnel. The mixture is poured on the filter paper. Sand particles being bigger in size do not pass through the filter paper, they remain on the filter and the liquid is collected in the beaker placed under the funnel.
- iii. Heat the beaker and allow it to boil. Water evaporate leaving behind the salt.



**Q.5. A mixture of iron nails, salt, oil and water is provided to you. Give stepwise methods to separate each component from this mixture.** [NCERT Exemplar]

**Ans.**

- i. Iron nails are separated from the mixture by handpicking.
- ii. The mixture is allowed to stand for some time. Two separate layers will be formed. The top layer of oil is decanted to separate it from the mixture.
- iii. Pour this liquid into a kettle, close its lid and heat it. Now take a metal plate with some ice on it and hold this plate just above the spout of the kettle. The steam coming out condenses when comes in contact with the metal plate and forms water and salt is left behind.

**Q.6. Name the steps and methods you will use to separate the following:**

**(i)** Coconut oil, salt and water

**Ans.** Coconut oil is separated by using a separating funnel and the salt is separated by evaporation.

**(ii)** Chalk powder, water and stones

**Ans.** Stones being heavy are separated by sedimentation and chalk powder is separated by filtration.

**(iii)** Iron filings, sand and salt

**Ans.** Iron filings are separated using a magnet and the sand is separated by dissolving in water followed by sedimentation and decantation.