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| **INDIAN SCHOOL AL WADI AL KABIR** | | |
| **CLASS: VI** | **DEPARTMENT: SCIENCE**<br>**2026 - 2027** | **DATE: 14/11/2026** |
| **TEXTBOOK Q & A** | **TOPIC: METHODS OF SEPARATION IN EVERYDAY LIFE.** | **NOTE: A4 FILE FORMAT** |
| **NAME OF THE STUDENT:** | **CLASS & SEC:** | **ROLL NO.** |

1. What purpose does handpicking serve in the process of separation?
(i) Filtration
(ii) Sorting
(iii) Evaporation
(iv) Decantation

2. Which of the following substances are commonly separated using the churning method?
(i) Oil from water
(ii) Sand from water
(iii) Cream from milk
(iv) Oxygen from air

3. Which factor is usually essential for filtration?
(i) Apparatus size
(ii) Presence of air
(iii) Pore size
(iv) Temperature of the mixture

4. State with reason(s) whether the following statements are True [T] or False [F]. Also, correct the False statement(s).
(i) Salt can be separated from the salt solution by keeping it under the Sun. [ T]
(ii) Handpicking should be used only when the quantity of one component is less. [ T]
(iii) A mixture of puffed rice and rice grains can be separated by threshing. [ F]
[Hint: The mixture of puffed rice and rice grains can be separated by the process of winnowing due to the weight difference between the particles.]
(iv) A mixture of mustard oil and lemon water can be separated by decantation. [ T]
(v) Sieving is used to separate a mixture of rice flour and water. [ F]
[Hint: This mixture should be separated by a filtration method.]

5. Match the mixtures in Column I with their method of separation in Column II.

| **Column I** | **Column II** |
|---|---|
| (i) Gram flour mixed with black gram | (a) Handpicking |
| (ii) Chalk powder mixed with water | (b) Magnetic separation |
| (iii) Corn mixed with potatoes | (c) Decantation |
| (iv) Iron powder mixed with sawdust | (d) Sieving |
| (v) Oil mixed with water | (e) Filtration |

| **Column I** | **Column II** |
|---|---|
| (i) Gram flour mixed with black gram | (d) Sieving |
| (ii) Chalk powder mixed with water | (c) Filtration |
| (iii) Corn mixed with potatoes | (a) Handpicking |
| (iv) Iron powder mixed with sawdust | (b) Magnetic separation |
| (v) Oil mixed with water | (e) Decantation |

6. In what situations would you use decantation instead of filtration to separate solids from liquids?
[Hint: Decantation is used when the solid particles are heavy and settle at the bottom of the liquid (like sand in water). It is used when a little impurity is acceptable.]

7. Can you relate the presence of nasal hair to any separation process?
[Hint: Yes, nasal hair acts like a natural filter, trapping dust and larger airborne particles from entering the lungs. This is similar to the process of filtration, where solid particles are blocked by pores.]

8. During the COVID-19 pandemic, all of us wore masks. Generally, what material are they made of? What is the role of these masks?
[Hint: Most masks are made from non-woven fabric or filtering cloth like polypropylene. They act as a filter, trapping droplets and particles in the air, preventing the spread of viruses and protecting from infections.]

9. A mixture containing potatoes, salt and sawdust has been given to you. Outline a stepwise procedure for separating each component from this mixture.
[Hint: Handpick the potatoes because they are large and visible solids.
Dissolve the remaining mixture, which is salt and sawdust, in water. Salt dissolves in water, and sawdust will float on the water.
Filter the sawdust from the top of the water through the process of filtration.
Heat the water so that evaporation of water takes place to get salt back.]

10. Read the following story titled ‘Intelligent Leela’ and tick the most appropriate options. Provide a suitable title of your choice for the paragraph.

Leela was working on the farm with her father when she realised that they had left their drinking water at home. Before her father felt thirsty/hungry, she went to the nearby pond to fetch some water/grains. After obtaining some water in the container, she noticed that the water was muddy

and fit/unfit for drinking. To purify the water, she kept it for some time, and then she filtered/ churned the muddy water using a piece of paper/muslin cloth. Leela then cooled/boiled the water for about 10 minutes in a covered pan. After cooling/boiling, she filtered/churned it again and made it fit/unfit for drinking. She served this water to her father while having food, who blessed her and appreciated her efforts.

[Hint: Title Suggestion: "Leela's Clever Water Purification Methods"

- Thirsty,
- Water,
- Unfit,
- Filtered,
- Muslin cloth,
- Boiled,
- Cooling,
- Filtered,
- Fit

Leela correctly used sedimentation, filtration with cloth, boiling, and then filtering again to ensure the water was safe to drink.]

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