

11. **Assertion (A):** If the temperature of a saturated solution is increased then the solution behaves like unsaturated solution.

Reason (R): The solubility decreases with the increase in in temperature

12. **Assertion (A):** Distillation is a process involving evaporation and condensation.

Reason (R): It helps separate components with different boiling points.

III. Read the following passage and answer the question carefully.

Aman accidentally dropped a mixture of salt and sand into a beaker of water. To separate the components, he first stirred the mixture and observed that the salt dissolved while sand settled at the bottom. He then filtered the mixture. The clear liquid collected was heated to obtain salt crystals.

13. Which separation method helped Aman remove sand from the mixture?

- a) Evaporation b) Filtration c) Condensation d) Distillation

14. Which method was used to obtain salt crystals from the clear liquid?

- a) Condensation b) Filtration c) Evaporation d) Sedimentation

15. What type of mixture was the original combination of salt and sand in water?

- a) Compound b) Pure substance
c) Heterogeneous mixture d) Homogeneous mixture

16. What happens to the water during evaporation?

- a) It changes into ice b) It remains as water
c) It changes into vapor and escapes d) It forms new substance with salt

IV. Short answer type questions -I

17. Why are solutions important in our daily life? (Give 2 examples)

18. How does temperature affect solubility of a solid in water?

19. Why does ice float on water?

20. How will you change an unsaturated solution to a saturated solution?

21. Differentiate between mass and weight.

22. A block of iron has a mass of 600 g and a density of 7.9 g/cm^3 . Calculate its Volume.

V. Short answer type questions- II

23. Describe the process of distillation with a neat diagram.

24. Describe an activity to show the effect of stirring on dissolving rate.

25. With examples, explain how mixtures are separated using filtration, evaporation, and decantation.

26. Write differences among solution, colloid, and suspension (any three points each).