ASSIGNMENT Class: IX Sub. Science CHAPTER - IS MATTER AROUND US PURE

1. Write any two tests to distinguish between a salt-in-water and sand-in-water. (2)
2. A solution contains 20g of sugar dissolved in 180g of water. Calculate the concentration in terms of mass by mass percentage of the solution. (2)
3. Name the method:-

   (a) Used in washing machines to squeeze out water from wet clothes.

   (b) Used to separate pigments from natural colors (2)
4. Distinguish between a mixture from a compound. Give four points. (2)
5. Write 2 advantages of using crystallization technique over simple evaporation technique. (2)
6. What is chromatography? State its principle. Write its advantages over other techniques. (2)
7. What is meant by concentration of a solution? Which is the most common method of expressing the concentration of a solution? (2)
8. what will happen when a saturated solution is

   1. heated 2. Cooled down (2)
9. What is the basic principle behind the process of centrifugation? Give two applications of the process.
10. Name the technique you would follow to separate the following mixtures. (2)

    A.. Muddy water B. Iron fillings and water C. Kerosene and water (2)
11. Distinguish between physical and chemical change. (write any 4 points) (2)
12. Classify the following as chemical or physical change

    A. Rusting of almirah C. Dissolving common salt in water

    B. Ripening of fruits D. Freezing of water (2)
13. Differentiate between solution, suspension and colloids on the basis of the following properties

    A. Transparency B. Filtration C. Stability (3)
14. What are homogenous and heterogeneous mixtures? Give one example of each. (2)
15. Draw a flow diagram of a typical water works and explain in brief. (3)
16. With the help of a slow diagram show the process of obtaining different gases from air.
17. Arrange the gases present in air in increasing order of their boiling point. (2)

18. (a) What are colloids?

    (b) Write important properties of colloids (any 2 points)

    (c) Give examples of an aerosol and emulsion. (3)

19. A solution contains 40 ml of alcohol in 360 ml of water. Calculate the concentration in terms volume by volume percentage of the solution. (2)

20. (a) What is concentration?

    (b) How would you prepare saturated solution of common salt at room temperature?

    (c) Air is a mixture or compound? Support your answer with two reasons.

    (d) Write the principles of centrifugation. (2)

21. Name the technique you will use to separate:-

    A. Butter from curd. B. Mixture of oil and water (2)

22. Write three points of difference between a physical and chemical change. (2)

23. Burning of a candle is both physical and chemical change. Explain (2)

24. Solubility of potassium nitrate at 313 K is 62 g. What mass of potassium nitrate would be needed to produce a saturated solution of KNO3 in 52 g of water at 313 K? What is the effect of change of temperature on the solubility of a salt? (2)

25. Give reasons : (1 each)

    A. path of beam of light is not visible through a solution

    B. particles of solution cannot be seen with a naked eye (2)

26. Explain why particles of a colloid do not settle down when left undisturbed while in the case of a suspension they do. (2)

27. Classify the following into physical or chemical change. (2)

    A. burning of a candle B . freezing of water

    C. mixing of iron filings and sand D. fading of clothes.

28. Write any three differences between a compound and a mixture. (3)

29. Based on the following characteristics distinguish in tabular form the behavior of true solution, suspension and colloidal solution.

    A. appearance b. visibility c. filterability D. Tindal effect E. particle size (5)

30. Describe the method with the help of a diagram to separate a mixture of two immiscible liquids- kerosene oil and water. (3)