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Grade : IX	Subject : Chemistry	Name:
Date :	Empower- 1 Practice Worksheet	Chapter No. 1 and 2

- Air shows the property of
(a) N₂ (b) O₂ (c) **Both (a) and (b)** (d) None of these.
- The components of water can be separated by
(a) Physical methods (b) **Chemical methods**
(c) Both (d) they cannot be separated
- Mixture can be
(a) Homogeneous (b) heterogeneous
(c) **Both (a) and (b)** (d) pure substance
- Brass is a
(a) Compound (b) Element
(c) **Homogeneous mixture** (d) Heterogeneous mixture
- In sugar solution,
(a) **Sugar is solute, water is solvent**
(b) Sugar is solvent, water is solute
(c) Both are solutes
(d) Both are solvents.
- Brass is a solution of molten copper in
(a) solid zinc
(b) **molten zinc**
(c) gaseous zinc
(d) molten tin
- 24 carat of diamond is equal to
(a) **200 mg** (b) 200 g (c) 95% mg (d) 91% gold
- 1 carat of diamond is equal to
(a) **200 mg** (b) 200 g (c) 100 mg (d) 100 g
- Diamond is lustrous because
(a) it is colourless (b) it is hard
(c) it is pure (d) **its refractive index is high**
- If we burn graphite,
(a) residue will be left (b) **no residue will be left**
(c) it will not burn (d) it will change into diamond.
- Nanometer is an
(a) Instrument used for measuring micro-distance
(b) Instrument used for measuring macro-distance
(c) **Unit for measuring micro-distance**
(d) Unit for measuring macro-distance.
- Barometer measures
(a) Pressure (b) **Atmospheric pressure**
(c) Wind velocity (d) Gaseous pressure.
- Thermometer is an instrument that measures
(a) **Temperature of substance** (b) Heat of substance
(c) Radiation of substance (d) Flow energy in a substance.
- Anemometer measures
(a) Amount of haemoglobin in blood (b) Pollination of plant by the wind
(c) Wind resistance (d) **Wind speed.**

1mark questions

- Alka was making tea in a kettle. Suddenly she felt intense heat from the puff of steam gushing out of the spout of the kettle. She wondered whether the temperature of the steam was higher than that of the water boiling in the kettle. Comment on it.
- Which of the following diffuses faster? Water vapour, wax or ethyl alcohol.
- What is tincture of iodine?

18. Any idea about 'concentration of a solution'?
19. State the principle for separation of immiscible liquids?
20. Why a mixture is an impure substance?
21. Define aerosol.
22. What is meant by solubility of a solute?
23. What is meant by chromatography?
24. How to separate two immiscible liquids?
25. Why is water called a universal solution?

2 marks questions

26. 'Osmosis is a special kind of diffusion'. Explain.
27. While diluting a solution of salt in water, a student by mistake added acetone (boiling point is 56°C). What technique can be employed to get back the acetone? Justify your choice. Practical based question
28. Define emulsion with example.
29. Which process can purify the impure sample of potash alum?
30. Name the solutions which show the Tyndall effects.
31. Name some homogeneous as well as heterogeneous mixtures.
32. How is fog different from smoke?
33. Is water a compound? Prove your answer.
34. Calculate the concentration of 45 g salt present in 500 g of solution.
35. Give two applications of centrifugation.
36. How can we convert saturated solution into unsaturated by heating?
37. Show the different types of colloids with examples.
38. What is Tyndall effect?

3 marks questions

39. You want to wear your favourite shirt to a party, but the problem is that it is still wet after a wash. What steps would you take to dry it faster?
40. Are the three states of matter inter-convertible? How can they interconnect? Explain it.
41. (a) What happens to sugar when it is dissolved in water? Where does the sugar go? What information do you get about the nature of matter from the dissolution of sugar in water?
(b) Which type of compounds can be purified by sublimation?
42. How to differentiate between sol, solution and suspension?
43. How to separate ammonium chloride + sodium chloride. Explain briefly.
44. What is centrifugation? Explain briefly.
45. What are the differences between a physical change and a chemical change?
46. What is the procedure to obtain different gases from air?
47. A girl is given naphthalene balls powder and common salt. Help her by explaining how to separate the mixture.
48. Give the differences between true solution, colloidal solution and suspension?
49. Draw a flow diagram to show the water purification system in water works.

5 marks

50. During an experiment the students were asked to prepare a 10% (Mass/Mass) solution of sugar in water. Ramesh dissolved 10g of sugar in 100g of water while Sarika prepared it by dissolving 10g of sugar in water to make 100g of the solution.
(a) Are the two solutions of the same concentration.
(b) Compare the mass % of the two solutions.