



CHEMISTRY

BOOKS - VGS PUBLICATION-BRILLIANT

IS MATTER PURE

Examples

1. A solution contain 50 g of a common salt in 200 g of water. Calculate the concentration in

terms of mass by mass percentage of the solutions.



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2. 80 ml of solution contains 20 g of solute .Calculate the concentration in terms of mass of volume percentage of the solution.



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Improve Your Learning

1. Explain the following given examples.

Saturated solution



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2. Explain the following given examples.

Pure substances



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3. Explain the following given examples.

Colloid



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4. Explain the following given examples.

Suspension



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5. How would you confirm that a colourless liquid given to you is pure water?



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6. Which of the following materials fall in the category of a "pure substances"? Give reasons.

(a) Ice (b) Milk (c) Iron (d) Hydrochloric acid (

e) Calcium oxide (f) Mercury (g) Brick (h) Wood

(f) Air



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7. Identify the solution among the following mixtures.

a) Soil b) Sea Water c) Air d) Coal e) Soda water.



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8. Determine the mass by mass percentage concentration of a 100 g salt solution which contains 20 g salt.



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9. Calculate the concentration in terms of mass by volume percentage of the solution containing 2.5 g potassium chloride in 50 ml of potassium chloride(KCl) Solution.



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10. Which of the following will show "Tyndall effect"? How can you demonstrate "Tyndall effect" in them?

(a) Salt-solution (b) Milk (c) Copper sulphate solution (d) Starch Solution



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11. Take a solution , a suspension ,a colloidal dispersion in different beakers. Test whether each of these mixtures shows the Tyndall effect by focusing a light at the side of the container.



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Question Given In The Lesson

1. Can you prove this(path of light through the solution) with an experiment?



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2. IF the solution is diluted, can the path of light be visible?



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3. What would happen if you add a little more solute to a solvent?



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4. Did you ever observe this phenomenon in the cinema halls?



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5. Is the mixture heterogeneous? Give reasons.



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6. How do we separate the salt and ammonium chloride?



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7. Can you give any examples where we use fractional distillation technique?



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Previous Summative Assessments Questions 1 Mark Questions

1. There is a mixture with sand and iron fillings.

Write an activity for the separation of iron fillings from sand.



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Previous Summative Assessments Questions 2 Mark Questions

1. Frame two questions to understand "Homogeneous mixture".



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Previous Summative Assessments Questions 4 Mark Questions

1. Name the instrument used to separate immiscible liquids. Draw a neat diagram of it taking kerosene and water as immiscible liquids.



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Essential Material For Examination Purpose 1 Mark Questions

1. What is meant by 'Pure substances'?



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2. What is a mixture?



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3. What is a homogeneous mixture? Give examples.



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4. What is a heterogeneous mixture? Give examples.



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5. What are the factors affecting rate of dissolving?



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6. When do you say that a solution is dilute solution?



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7. What do you say that a solution is a concentrated solution?

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8. Define suspension.

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9. What is an emulsion ? Give two examples.

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10. What is a colloid?



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11. What is dall effect ?



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12. What techique do you use to separate the colours?



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13. When do we use fractional distillation method for the separation of miscible liquids?



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14. What is the definition given by Lavoisier for the 'element'?



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15. What is the principle involved in separation of immiscible liquids using separation funnel?



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16. What is the use of glass beads in the fractional distillation column?



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17. How will you separate a mixture containing kerosene and petrol (difference in their boiling points is more than $25^{\circ}C$). Which are miscible with each other?



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18. What type of mixture are separated by the techniques of crystallisation?



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Essential Material For Examination Purpose 2 Mark Questions

1. What is centrifuge? What are its used?



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2. Define a mixture and mention its properties.



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3. What are homogeneous and heterogeneous mixtures ? Give examples.



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4. Define solution, solvent and solute.



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5. Mention the properties of a solution.



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6. whatt are the disperse phase and dispersion medium of a colloidal solution?



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7. Define Miscible and immiscible liquids.



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8. Define element and compound. Give examples.



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9. How do you appreciate the efforts of scientists in discovering elements?



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10. What are the factor on-which solubility depends on ?



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11. What is a concentrated and dilute solution?



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12. How do you separate following mixture?

a) Iodine from sodium chloride b) Petrol from

water c) Butter from milk d) Sugar from water



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Essential Material For Examination Purpose 4 Mark Questions

1. Define the terms:

- a) Solubility b) Saturated solution c)
Unsaturated solution d) Concentration



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Conceptual Understanding

1. Acetone and water and separated by.....

A. distillation

B. Chromatography

C. Sublimation

D. Fractional distillation

Answer: A



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2. Kerosene and water are separated by.....

A. distillation

B. Separating funnel

C. Sublimation

D. Fractional distillation

Answer: B



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3. Assertion (A): Water + sugar is a solution

Reason (R): IF we pass beam of light through a solution, It scatters light .

A. A and R are true

B. A and R are false

C. A is true but R is false

D. A is false but R is true

Answer: C



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4. Take two test tubes with some water. Add salt powder to one test tube and add crystals of salt to the second one. Observe, From your observation you may conclude that solubility depends upon

A. Temperature

B. size of the solute

C. string

D. above all

Answer: B



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5. The correct process is

- a) add solvent more to dilute a solution
- b) add solution more to dilute a solution
- c) add solute more to concentrate a solution
- d) add solvent more to concentrate a solution.

A. b,d

B. a,c

C. b,c

D. a,d

Answer: D



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6. Which of the given device is used to separate a mixture of kerosene and water?

A. conical flask

B. burette

C. pipette

D. test tube

Answer: B



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7. Which apparatus is required to check whether milk is colloid or true solution?

A. filter paper

B. laser light

C. burner

D. A and B

Answer: B



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8. How do you examine whether a starch solution is colloid or suspension?

A. By sending light beam

B. By leaving undistributed for sometime

C. By heating it

D. Any of the above

Answer: B



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9. How do you separate a miscible liquid in your lab.

A. By using separating funnel

B. By using distillation method

C. By using evaporation method

D. By using sublimation method

Answer: B



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10. Cream from milk can be separated by

A. centrifugation

B. distillation

C. fractional distillation

D. chromatography

Answer: A



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11. Tyndall effect cannot be shown by

A. colloids

B. suspensions

C. emulsion

D. solutions

Answer: D



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12. The component of the air among the following which has the highest boiling point is

A. nitrogen

B. argon

C. methane

D. oxygen

Answer: C



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13. The first definition for 'element' is given by

A. Lavoisier

B. Henning brand

C. Sir Humphry Davy

D. Robert boyle

Answer: A



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14. Coloured gem stone is an example of.....

A. solution

B. suspension

C. Colloid

D. emulsion

Answer: C



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15. Ink is mixture of.....in water.

A. dye

B. salt

C. sugar

D. acid

Answer: A



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16. The term element is first used by.....

A. Robert Boyle

B. Henning brand

C. Lavoisier

D. Burzelius

Answer: A



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17. Percentage of oxygen in air by volume.....

A. 20.9 %

B. 78.1 %

C. 0.03 %

D. 0.1 %

Answer: A



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18. Percentage of nitrogen in air by volume.....

A. 20.9 %

B. 78.1 %

C. 0.03 %

D. 0.1 %

Answer: B



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19. Percentage of argon in air by volume.....

A. 20.9 %

B. 78.1 %

C. 0.03 %

D. 0.9 %

Answer: D



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20. Components of blood sample are separated by.....

A. distillation

B. Sublimation

C. fractional distillation

D. Centrifugation

Answer: D



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21. Napthalene in water separated by

A. distillation

B. Chromatography

C. Sublimation

D. Centrifugation

Answer: C



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22. Petrochemicals are separated by

A. fractional distillation

B. distillation

C. Sublimation

D. separating funnel

Answer: A



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23. 80 ml of solution contains 20 g of solute
.Calculate the concentration in terms of mass
of volume percentage of the solution.

A. 0.2

B. 0.4

C. 0.25

D. 0.8

Answer: C



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24. Ice cream is a

A. suspension

B. colloid

C. emulsion

D. solution

Answer: B



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25. The ingredients in ice cream are.....

A. milk

B. sugar

C. flavours

D. all of these

Answer: D



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