



CHEMISTRY

BOOKS - VGS BRILLIANT CHEMISTRY (TELUGU ENGLISH)

IS MATTER PURE

Improve Your Learning

1. Which separation techniques will you apply for

the separation of the following ?

(a) Sodium chloride from its solution in water.

(b) Ammonium chloride from a mixture containing sodium chloride and ammonium chloride.(c) Small pieces of metal in the engine oil of a car.(d) Different pigments from an extract of flower petals.

- (e) Butter from cards (f) Oil from water
- (g) Tea leaves from tea. (h) Iron pins from sand
- (i) Wheat grains from husk.
- (j) Find mud particles suspended in water.



2. Classify each of the following as a homogeneous

or heterogeneous mixture . Given reasons.

Soda water, wood , air , soil, vinegar, filtered tea.

Watch Video Solution

3. Classify the following into elements, compounds and mixtures .

a) Sodium b) Soil c) Sugar Solution d) Silver e) Calcium carbonate f) Tin g) Silicon h) Coal i) Air J) Soap k) Methane l) Carbondioxide m) Blood



4. Classify the following substances in the below given table.

Ink,sodawater, brass, fog,blood,aerosol sprays, fruit

salad, black coffee, oil and water, boot polish, air ,

nail polish, starch solution, milk

Watch Video Solution

5. Draw a figures of arrangement of apparatus for distillation and fractional distillation. What do you find the major difference in these apparatus?

6. Write the steps you would use for making tea. Use the words given below and write the steps for making tea.

Solution, solvent, solute, dissolve, soluble, insoluble, filtrate

and residue.

Watch Video Solution

Question Given In The Lesson

Match Midea Calutia

1. Can you give few more examples of this (homogeneous mixtures) kind?



2. How you do determine the percentage of the

solute present in the solution?

Watch Video Solution

Previous Summative Assessments Questions 4 Mark Questions

1. Draw the arrangement of apparatus of fractional distillation experiment. What is the advantage of using the fractionating column?



2. Diagram show one of the process of separation by mixtures, Based on the diagram answer the following questions.

(i) Identify the process involved in the diagram.

(ii) Is something missing in the diagram, IF so what is that?

(iii) IF 'B' represents ammonium chloride, then what

is 'A' represent?

(iv) Give one more example for separation of mixture using above process?







Essential Material For Examination Purpose 2 Mark Questions

- **1.** Name the technique to separate.
- (i) butter from curd (ii) salt from sea-water(iii)

camphor from salt

2.	Match	the	following	columns
List-I			List-II	
(solubility of)			(Interaction)	
A) SO ₂ in water			P) Ion-dipole	
B) Xe in water		Q) Hydrogen bonding		
(C) NH ₄ Cl in water		R) dipole - induced dipole	
1	D) Glucoe in water		S) dipole - dipole	



Essential Material For Examination Purpose 4 Mark Questions

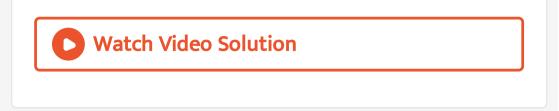
1. Compare the properties of suspensions and

colloids.

2. Explain the process of preparation of ice cream.

Watch Video Solution
3. what Is chromatography ?What are its uses?
Vatch Video Solution
4. Explain the process of separation of components
of air briefly.

5. Distinguish between mixtures and compounds.



6. Draw a flow chart shows the process of obtaining

gases from air.

Watch Video Solution

7. Draw a flow chart to understand the chemical and

physical nature of the matter.

8. Give some daily life experiences where you can observe "Tyndall effect". (OR) What is Tyndall effect ? Write any two applications of Tyndall effect.

Watch Video Solution

9. How do you separate the mixture of napthalene

powder and salt powder ?

Watch Video Solution

Previous Summative Assessments Bits

1. Colloidal solutions or heterogeneous In online and always consist of alleast two phases, the disperse phase and the dispersion medium. Which of the following Is not a colloidal solution ?

A. Shoe polish

B. Mud water

C. Gel

D. Ice cream

Answer: B

2. Acetene-Water: Distillation:: Ammonium Chloride-

Salt?

A. Sedimentation

B. Filtration

C. Sublimation

D. Fractional distillation

Answer: C



3. The correct order of sentences related to preparation of super saturated solution is
Add one more spoon of sugar to it
Q.Add one spoon of sugar to 100 ml of water in a breaker
R.On heating the undissolved sugar dissolves to form & super saturated solution

S. It dissolves totally to form saturated solution

A. Q,S,P,R

B. Q,R,P,S

C. P, Q, R. S

D. Q, P, R, S





4. On mixing of dil. hydrochloric acid to the mixture of Iron dust and sulphur powder we obtain two gases. One of them Is hydrogen and another would be

A. Sulphur dioxide

- B. Hydrogen Sulphide
- C. Sulphur Trioxide

D. Oxygen



5. Assertion(A): We feel cool after sweatingReason (R): We store water is earthen pots during summer.

A. Both (A), (R) are correct, (R) is not the correct

explanation of (A).

B. (A) is correct, (R) is incorrect.

C. (A) is incorrect, (R) is correct.

D. Both (A),(R) are correct, (R) is the correct

explanation of (A).

Answer: A

Watch Video Solution

6. Assertion (A) : Chromatography Is used to separate the coloured Pigments in flowers.
Reason (R) : Chromatography Is a technique for the separation of mixtures Into Its individual components.

A. Both assertion (A) and reason (R) are correct

and (R) Is the correct explanation of (A).

B. Assertion (A) Is correct but reason (R) Is

Incorrect.

C. Assertion (A) Is incorrect but reason (R) Is correct.

D. Both assertion (A) and reason (R) are correct

but (R) is not correct explanation of (A).

Answer: A

7. Ink is a mixture of a dye in water. We can separate the components In the Ink using evaporation. The correct observation In the experiment is
i) Water is separated in the form of vapour.
ii) Dye component doesn't evaporate. Iii) Water and dye components gets evaporated .

iv) Dye compounds gets sublimated

A. (i) and (ii)

B. (iii) Only

C. (i) and (iv)

D. (i) only



8. On adding a piece of aluminium foil to blue coloured copper sulphate solution, copper will be deposited on aluminimum foil. Then the solution.

A. No change in colour

B. Becomes colourless

C. Turns to red

D. Turns to green

Answer: B

Watch Video Solution

9. Match the

following

columns

Column-l

(Probable Heat released)

- A) NaOH + HCl \rightarrow NaCl + H₂O
- B) NaOH + HCN \rightarrow NaCN + H₂O Q) 17.2 KCal
- C) NaOH + HF \rightarrow NaF + HN
- D) $NH_4OH + H_2CO_1 \rightarrow NH_4HCO_3 + H_2O_1$

Column-II

- P) 5.6 KCal
- Q) 17.2 Rea
- R) 13.6 KCal
- S) 10.2 KCal

A. Liquid

- B. solid
- C. Solid or liquid

D. Gas

Answer: C



10. Element is a basic form of matter that cannot be broken down into simple forms by chemical reactions. IF any substance can be separated into two or more constituent paris by a chemical reactions it should be

A. Mixture

B. Heterogeneous mixture

C. Homogeneous mixture

D. Compound

Answer: D



11. Diesel -water is an immiscible mixture of solution, The diagram of apparatus is used to separate the mixture is









Answer: A



12. The amount in gr mass of solute present in 100 gr mass of solution is called concentration. If 50 gr of salt in 200 gr of water, then concentration , of the solution would be

A. 0.25

B. 0.1

C. 0.5

D. 0.2

Answer: D



13. IF hot summer Revathi gave lemonade to the guests who visited her home. The solute in that solution is / are

(i) Water (ii) Lemon juice (iii) Sugar (iv) Salt

A. (i) and (ii)

B. (iii) and (iv)

C. (ii),(iii)and (iv)

D. (i) only

Answer: C

Watch Video Solution

14. The components of a homogeneous mixure are two intimately mixed up that it will be difficult to distinguish them form each other by visual observations. Example for each mixture is A. Kerosene water

B. Air

C. Napthalein-water

D. Oil-water

Answer: B

Watch Video Solution

15. Solubility is the measurement of amount of solute that dissolves in a solvent at a certain temperature. Factors that effect the solubility are (i) Temperature

(ii) Size of the solute particles

(iii) Stirring of a solution

A. (i) and (ii)

B. (ii) and (iii)

C. (i) ,(ii) and (iii)

D. (i) only

Answer: C



16. Milk is

A. Suspension

B. Emulsion

C. Colloid

D. Gel

Answer: C

Watch Video Solution

17. When we go through deep forest, the following effect can be observed.

A. Photo electric effect

B. Raman effect

C. Tyndall effect

D. Comphton effect

Answer: C

Watch Video Solution

18. There must be following apparatus in chromatography laboratory activity

A. Thermometer

B. Litmus paper

C. Marker pen

D. Kerosene

Answer: C



19. Which of the following cannot be separated by sublimation when it is mixed with sand

A. Salt

B. Ammonium chloride

C. Camphor

D. lodine

Answer: A

Watch Video Solution

20. Ram: Salt is a compound

Raj:Salt is a mixture, who is correct?

A. Ram

B. Raj

C. Both

D. None



21. Kerosene and caster oil are immisible liquids, To separate kerosene from caster oil...... Is used type.

A. Filter paper

B. Funnel

C. Separating funnel

D. Distillation apparatus

Answer: D



22. The method of separation of husk from wheat

flour is called

A. Sieving

B. Handpicking

C. Filtration

D. Distillation

Answer: A

23. Sneha: A mixture has variable composition Goutham: A compound has fixed composition

A. Sneha and Goutham are correct

B. Sneha and Goutham are incorrect

C. Sneha is correct, Goutham is incorrect

D. Sneha is incorrect, Goutham is correct

Answer: A



24. A solution contains 50 g of common salt in 150 g

of water. Mass percentage of solution is

A. 0.333

B. 3

C. 0.25

D. 0.2

Answer: C



25. When a solid changes to directly gaseous state,

the process is called

A. Diffusion

B. Sublimation

C. Evaporation

D. Boiling

Answer: B

Watch Video Solution

26. Which of the following shows Tyndall effect:

A. Shoe-polish

B. Salt water

C. Copper sulphate solution

D. Coffee

Answer: A

Watch Video Solution

27. Which of the following is not used in paper chromatography?

A. Beaker

B. Separating funnel

C. Pencil

D. Marker pen

Answer: B

Watch Video Solution

28. P:Tyndall effect is related to suspension

Q: Tyndall effect is related to colloidal solutions.

A. P,Q are true

B. P,Q are false

C. P True,Q False

D. P false,Q True

Answer: D

Watch Video Solution

Conceptual Understanding

1. Pure subtances among the following is

A. sodium chloride

B. copper sulphate

C. gold

D. air

Answer: C



2. The components of a solution are

A. solute

B. solvent

C. both A & B

D. no components





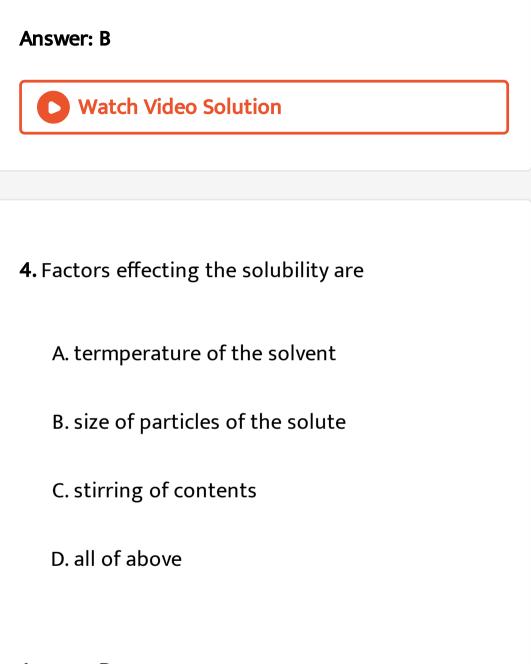
3. IF the amount of solute is less than the saturation level of a solution, then the solution is said to be

A. saturated solution

B. unsaturated solution

C. super saturated solution

D. heterogeneous solution



Answer: D



5. The measurement of amount of solute that dissolves in a solvent is

A. solubility

B. diluted

C. concentrated

D. saturated

Answer: A

6. Which of the following in an emulsion?

A. salt solution

B. mixture of oil and water

C. nail polish

D. cheese

Answer: B



7. Which of the following is a suspension?

A. salt solution

B. mixture of oil and water

C. nail polish

D. cheese

Answer: C

Watch Video Solution

8. Which of the following is colloidal dispersion?

A. salt solution

B. mixture of oil and water

C. nail polish

D. cheese

Answer: D



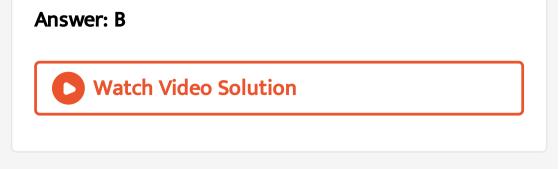
9. Which of the following is miscible liquid?

A. sand in water

B. alcohol in water

C. oil in water

D. none



10. Immiscible liquid can be separated by

A. separating funnel

B. centrifuge

C. fractional distillation column

D. filtration

Answer: A



11. Example of compound is

A. mercury

B. copper sulphate

C. aluminium

D. boron

Answer: B



12. Something with no adulteration means......

A. pure

B. impulse

C. specific

D. normal

Answer: A



13. When mixture of liquids are spun rapidly......component stay at the top. This is the principle of......

A. heavier, churning

B. lighter, churning

C. heavier, mixing

D. lighter, mixing

Answer: B

14. When the components of the mixture formed are uniformaly distributed through out it there it is called....... Mixture.

A. homogeneous

B. heterogeneous

C. aqueous

D. settle

Answer: A

15. When the components of the mixture formed are not distributed uniformly throughout it, then the mixture is called......mixture.

A. homogeneous

B. heterogeneous

C. aqueous

D. none

Answer: B

16. In a solution, the substance which dissolves in

another is called.....

A. solution

B. solute

C. solvent

D. solubility

Answer: C



17. In a solution, the substance which dissolves another is called......

A. solution

B. solute

C. solvent

D. solubility

Answer: B



18. Example for solid solution is.....

A. alloy

B. aerated drinks

C. amalgum

D. salt solution

Answer: A

Watch Video Solution

19. The amount of solute present in a saturated solution at a certain temperature is called......

A. dissolution

B. solubility

C. concentration

D. none of these

Answer: B

Watch Video Solution

20. IF the amount of solute is little in a solution,

then it is said to besolution.

A. diluted

B. concentrated

C. aqueous

D. none of these

Answer: A

Watch Video Solution

21. IF the amount of solute is more in a solution, then it is said to be......solution.

A. diluted

B. concentrated

C. aqueous

D. none of these

Answer: B

Watch Video Solution

22. The amount of solute present in a given amount

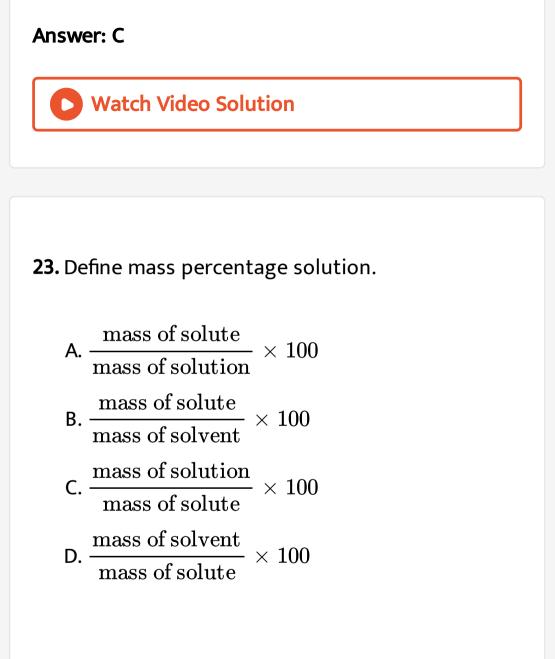
of solution is called...... Of the solution.

A. diluted

B. solubility

C. concentration

D. none of these



Answer: A



24. A mixture consisting of two liquids that do not mix and settle into layers when they left undistributed is called......

A. solution

B. suspension

C. emulsion

D. none of these

Answer: C

25. A heterogeneous mixture in which the solute particles do not dissolve and are visible to naked eye is called......

A. solution

B. suspension

C. emulsion

D. colloidal

Answer: B

26. Coloured pigments in plants can be separated by.....

A. distillation

B. evaporation

C. fractional distillation

D. paper chromatography

Answer: D

27. A liquid is said to be.....IF it dissolves completely.

A. miscilble

B. immiscible

C. both A & B

D. none of these

Answer: A



28. A liquid is said to be....if it does not dissolve

but form a layer over another liquid.

A. miscilble

B. immiscible

C. both A & B

D. neither A nor B

Answer: B



29. IF the difference in boiling points of two miscible liquids is greater than $25^{\circ}C$, then they are separated by.....

A. distillation

B. fractional distillation

C. Separating funnel

D. evaporation

Answer: A

30. Statement-I Air is homogeneous mixture of many gases.

Statement-II: They are separated by fractional distillation.

A. both the statements are true

B. Statement-I is true and statement-II is false

C. Statement-I is false and statement-II is true

D. both the statements are false

Answer: A

31. Substances which can be separated into two or more components by chemical reactions are called

A. elements

B. mixtures

C. compounds

D. none of these

Answer: C

32. The basic form of matter that cannot be broken down into simpler substances in chemical reactions is

A. element

B. compound

C. mixture

D. none of these

Answer: B

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

A. Robert Boyle

B. Henning brand

C. Lavoisier

D. Burzelius

Answer: C



34. Some liquids have the property of mixing in all

proportions, forming a homogeneous solution. This

property is known as.....

A. miscibility

B. solubility

C. immiscibility

D. none of these

Answer: A

Watch Video Solution

35. Is the main factor in separating two immiscible liquids.

A. Pressure

B. volume

C. Density

D. Mass

Answer: C



36.are Heterogeneous mixtures in which the particle size is too small to be seen with the naked eye but is big enough to scatter light.

A. Suspension

B. Solutions

C. Colloid

D. none of these

Answer: C

Watch Video Solution

37. Air is a.....

A. mixture

B. colloid

C. solution

D. none of these

Answer: C

Watch Video Solution

38. Nail polish is a.....

A. solution

B. colloid

C. suspension

D. none of these



39. Sodium is an.....

A. element

B. compound

C. suspension

D. emulsion

Answer: A



40. Methane is an.....

A. element

B. compound

C. suspension

D. emulsion

Answer: B

Watch Video Solution

41. Steel is a

A. solid solution

B. liquid solution

C. gaseous solution

D. salt solution

Answer: A

Watch Video Solution

42. Cold cream is.....

A. solution

B. suspension

C. Colloid

D. emulsion

Answer: D



43. Assertion (A):Air is compound substance.

Reason (R): We can separate air into two or more

components only by means of a chemical reaction.

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: B

Watch Video Solution

44. All the solutions are 'x' s. But not all 'x' s are solutions.

Guess the 'x'.

A. Pure substances

B. Mixture

C. Atom

D. Liquid

Answer: B



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

A. Visible

B. Not visible

C. Lightly visible

D. Sometimes visible

Answer: B



46. A' is a mixture.No particles are settled down when it left undistributed form sometime. Light beam is visible throught it. Guess the 'A'

A. Solution

B. colloid

C. suspension

D. A or B

Answer: B

Watch Video Solution

47. Take concentrated solution of copper sulphate in a beaker. Drop a piece of aluminium foil in it. Then

A. Copper deposites on the aluminium foil

B. Aluminium dissolves

C. The solution becomes colourless

D. A and C

Answer: D

Watch Video Solution

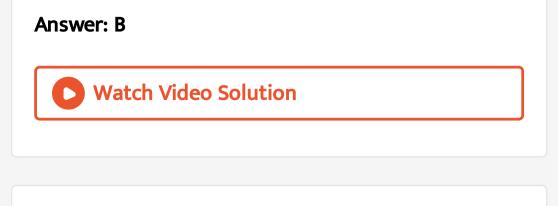
48. Copper cannot be separated from copper sulphate by physical methods. So it is

A. mixture

B. compound

C. A or B

D. colloid



49. The mixture of water and sugar is

A. Suspension

B. colloid

- C. Homogeneous mixture
- D. heterogeneous mixture

Answer: C



50. In a solution of tincture lodine , alcohol is

A. solution

B. solvent

C. solute

D. does not exist

Answer: B



51. The technique used to separate the mixture of

camphor and water is

A. distillation

B. fractional distillation

C. Sublimation

D. handpicking

Answer: C



52. Miscible liquids when the difference between their boiling points is $< 25^{\,\circ}C$ can be separated by

A. separating funnel

B. distillation

C. fractional distillation

D. evaporation

Answer: C



53. The scattering of beam of light when light passes through a colloidal solution is.....

A. Raman effect

B. Crompton effect

C. Photo electric effect

D. Tyndall effect

Answer: D

Watch Video Solution

54. Dye present in an ink can be separated by......

A. distillation

B. evaporation

C. fractional distillation

D. paper chromatography

Answer: B

Watch Video Solution

55. Urine is boiled down to discover phosphorous

by.....

A. Rober Boyle

B. Henning brand

C. Lavoisier

D. Burzelius

Answer: B

Watch Video Solution

56. Which of the following wil show "Tyndall effect"?
How can you demostrate"Tyndall effect" in them?
(a) Salt-solution (b) Milk (c) Copper sulphate solution (d) Starch Solution

A. B only

B. A,D

C. C only

D. B,D

Answer: A

Watch Video Solution

57. A) kerosene+salt B) water +salt C) water+ sugar

D) salt+ sugar

In the above mixtures, heterogeneous is / are

A. B,C

B. A,B,C

C. A

D. A,D

Answer: D

Watch Video Solution

58. a) sugar water b) tincture of iodine c) soda water d) salt water

The above given mixtures are

A. Homogeneous mixture

B. Heterogeneous mixture

C. Solutions

D. A and C

Answer: D

Watch Video Solution

59. Milk, butter, cheese, cream, gel, boot polish

These are

A. suspensions

B. colloids

C. solutions

D. B &C

Answer: B

Watch Video Solution

60. (a) set A:fog,clouds,mist

(b) set B: foam, rubber, sponge

(c) Set C: jelly, cheese, butter

Which of the above is contained solid as dispersion

media?

A. B

B.C

C. A

D. B and C

Answer: D



61. Churning makes the lighter components to come to the surface when a mixture of liquids are spun rapidly'. This principle is used in

A. Refrigerators

B. centrifuge

C. Microscope

D. Rice cookers

Answer: B

Watch Video Solution

62. Generally solid solutions are available in

A. alloys

B. gems

C. glasses

D. above all

Answer: D



63. Anitha, observed, 'Shake well before use' on a label of cough strup bottle. The syrup is

A. solution

B. colloid

C. suspension

D. above all

Answer: C



64. Ravi observed a beam of sun light passing through a small hole on the roof, into the room. It is formed because,

A. air is colloid

B. air true solution

C. air suspension

D. air is pure substance

Answer: A

Watch Video Solution

65. Tyndall effect is observed by

A. colloids

B. Solutions

C. suspension

D. pure substances



66. Which of the given mixtures cannot be separated by simple physical method?

A. husk in grains

B. stones in rice

C. fat in milk

D. Oxygen from water

Answer: D



67. Which method is suitable to separate salt from

sea water?

A. sublimation

B. evaporation

C. chromatography

D. distillation

Answer: B

Watch Video Solution

68. Petroleum is separated into its components is

A. distillation

B. fractional distillation

C. Evaporation

D. filtration

Answer: B



69. Sir, Humphry Davy is appreciable, because, he

was extremely successful in

A. discovering many elements like Na.Mg,B,Cl etc.

B. giving useful definition of element

C. separating of components of air

D. above all

Answer: A

Watch Video Solution

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

A. 0.1

B. 0.2

C. 0.3

D. 0.5

Answer: B



71. The separation technique to separate sodium chloride from its solution in water is

A. sublimation

B. condensation

C. Evaporation

D. filtration

Answer: C



72. By which method do you separate Ammonium chloride from a mixture containing sodium chloride and Ammonium chloride?

A. sublimation

B. condensation

C. Evaporation

D. filtration

Answer: A

Watch Video Solution

73. How do you separate small pieces of metal in

the engine oil of a car?

A. sublimation

B. condensation

C. Evaporation

D. filtration

Answer: D



74. How do you separate different pigments from an extract of flower petals?

A. sublimation

B. Chromatography

C. Evaporation

D. distillation

Answer: B

Watch Video Solution

75. In your home, how do you separate butter from

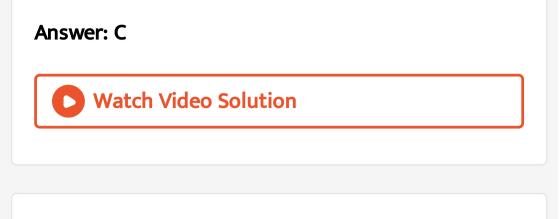
card?

A. evaporation

B. Chromatography

C. churning

D. distillation



76. This is not a property of colloid.

A. scattering light

B. tyndall effect

C. sedimentation

D. A and C

Answer: C



77. Some colloids in your home are A) gel B) milk C) oil D) boot polish

A. A,B

B. B,C

C. A,B,D

D. A,B,C

Answer: A

Watch Video Solution

78. Some pure substances in your home are

a) Ice B) milk c) iron d) air e) water f) gold g) coal

A. a,b,c,d

B. c,b,d,g

C. d,e,f,g

D. a,c,e,f,g

Answer: D

Watch Video Solution

79. Shaving cream is a..... Type of colloid.

A. foam

B. Emulsion

C. aerosol

D. solution

Answer: A

Watch Video Solution

80. In automobile exhaust, the dispersion medium

is.....

A. solid

B. liquid

C. gas

D. solution

Answer: C

Watch Video Solution

81. Clouds are.....

A. solution

B. suspension

C. colloid

D. emulsion

Answer: C

O Watch Video Solution