Science For Class IX
Is Matter Around Us Pure

<1M>

(Q.1) <#> Name the process which can be used to recover sugar from an aqueous sugar solution .
 <$>

(Q.2) <#> What happens when a saturated solution is heated ?
 <$>

(Q.3) <#> Name the process you would use to separate a mixture of water and alcohol.
 <$>

(Q.4) <#> Give an example of an aqueous solution in which gas is dissolved.
 <$>

(Q.5) <#> What is the cause of Tyndall effect as shown by colloid ?
 <$>

(Q.6) <#> Give two examples of colloidal solution .
 <$>

(Q.7) <#> Name the technique to separate -

(a) Salt from sea water
(b) Butter from curd
 <$>

(Q.8) <#> When a paper is burnt it is considered a chemical change because
(A) The change is permanent.   (B) There is no change in mass.
(C) The chemical composition changes.   (D) Both (1) and (3)
 <$>

(Q.9) <#> An aqueous solution at room temperature was heated and some more solute was added to it.
It was observed that after sometime solution could not dissolve any more of the solute. The solution
now formed is called
(A) Saturated solution.   (B) Super saturated solution.
(C) Unsaturated solution.   (D) Homogeneous solution.
 <$>

(Q.10) <#> A mixture of iron filings and sulphur powder can be separated using
(A) A magnet   (B) Handpicking
(C) Carbon disulphide solution   (D) Both (1) and (3)
 <$>

 (Q.11) <#> A mixture of chalk powder and water can be separated using the technique of filtration
because
(A) Chalk powder remains suspended in water.
(B) They form a miscible solution.
(C) The mixture can easily pass through filter paper
(D) Water acts as a good solvent.
 <$>

 (Q.12) <#> The necessary condition for separation of the components of a mixture regarding the boiling
points of the components of a mixture of two or more miscible liquids is
(A) Their boiling points should be same
(B) Their boiling points should be less than 373 K.

(C) Their boiling points should differ by 25 K.
(D) The boiling point of one of the component should be 373 K.
 <$>

(Q.13) <#> To check whether a given aqueous salt solution is saturated or unsaturated, we will
(A) Heat the solution   (B) Cool the solution
(C) Add more water to the solution   (D) Add more salt to the solution.
 <$>

(Q.14) <#> A mixture of salt and iodine is heated in a china dish. A few minutes later it is observed that
(A) The mixture starts melting.   (B) Salt is left behind in the dish.
(C) Iodine is left behind.   (D) Nothing happens.
 <$>

(Q.15) <#> Crystallization is considered better than evaporation for obtaining pure crystal of sugar because

(A) On heating sugar can burn.   (B) Sugar particles will evaporate.
(C) Sugar particles will decompose.   (D) Sugar particles will melt.
 <$>

 (Q.16) <#> Which is the only metal that exists in liquid state at room temperature?
(A) Sodium   (B) Mercury   (C) Germanium   (D) Gallium
 <$>

 (Q.17) <#> Why is inter-conversion of states of matter considered physical change?
(A) Because state changes from one form to another.
(B) Because a change in temperature is required.
(C) Because the chemical composition of the substance remains unchanged.
(D) Because they have same physical properties.
 <$>

 (Q.18) <#> Separating cream from milk is done using
(A) filtration   (B) Centrifugation machine   (C) Evaporation   (D) Boiling
 <$>

(Q.19) <#> The dispersed phase of a colloid is similar to _____ of a solution.
(A) Solute   (B) Solvent   (C) Solubility   (D) Concentration
 <$>

(Q.20) <#> A mixture
(A) Has a fixed composition.   (B) Does not have a fixed melting point.
(C) Has a fixed melting point.   (D) Is a pure substance.
 <$>

(Q.21) <#> When a suspension is left undisturbed for some time
(A) Some larger solute particles settle down at the bottom.
(B) All the solute particles settle down.
(C) It absorbs the light rays passing through it.
(D) It turns into a true solution.
 <$>

(Q.22) <#> The concentration of solute particles remains same throughout in
(A) Homogeneous mixture   (B) Heterogeneous mixture
(C) Suspension   (D) Both (1) and (2)
 <$>

(Q.23) <#> Tyndall effect and Brownian movement are exhibited by
(A) True solution   (B) Colloid
(C) Suspension   (D) Suspension and colloid both
 <$>

(Q.24) <#> S and Fe are heated together to prepare FeS. Composition in the ratio S:Fe by mass is
(A) 4:7   (B) 3:7   (C) 4:8   (D) 3:8
 <$>

(Q.25) <#> The size of particles in a true solution is less than
(A) 10^{-10}m   (B) 10^{-8}m   (C) 10^{-7}m   (D) 10^{-9}m
 <$>

 (Q.26) <#> The necessary condition to be specified while expressing solubility is
(A) Temperature   (B) Pressure   (C) Boiling point   (D) Atomic number of solute
 <$>

 (Q.27) <#> The principle behind fractional distillation technique in separation of two liquids is
(A) Difference in Melting point   (B) Difference in Boiling point
(C) Difference in Concentration   (D) Difference in Solubility
 <$>

 (Q.28) <#> Sulphur and sand mixture can be separated by the addition of which of the following solvent
(A) Carbon disulphide   (B) Water   (C) Alcohol   (D) Sulphuric acid
 <$>

 (Q.29) <#> Solubility of a gas in a liquid increases on
(A) Increasing temperature.   (B) Decreasing pressure.
(C) Increasing pressure.   (D) No effect of temperature and pressure.
 <$>

 (Q.30) <#> The non-metal which is liquid at room temperature is -

(A) Chlorine   (B) Bromine   (C) Iodine   (D) Fluorine
 <$>

 (Q.31) <#> Soap solution is an example of
(A) Sol   (B) Foam   (C) Emulsion   (D) Gel
 <$>

 (Q.32) <#> Solvent in air is
(A) Nitrogen   (B) Oxygen   (C) Carbon Dioxide   (D) Argon
 <$>

 (Q.33) <#> Dispersed phase and dispersion medium in a jelly are ___and__, respectively.
(A) Solid, liquid (B) Liquid, solid   (C) Solid, solid   (D) Liquid, Liquid
 <$>

 (Q.34) <#> Which out of the following will show tyndall effect?
(A) Smoke   (B) Salt solution (C) Alloys   (D) Aerated drinks
 <$>

 (Q.35) <#> Which of the following gas will boil first during fractional distillation of air?
(A) Oxygen   (B) Nitrogen   (C) Argon   (D) None of the above
 <$>

 (Q.36) <#> What type of solution are alloys?

(A) Solids in liquids   (B) Liquids in solids   (C) Solids in solids   (D) Liquids in liquids
 <$>

 (Q.37) <#> Size of the particles of a solution is less than:
(A) 10^{-8} m   (B) 10^{-9} m   (C) 10^{-7} m   (D) 10^{-10} m
 <$>

(Q.38) <#> Colloid having liquid dispersed in liquid is called:
(A) Sol   (B) Gel   (C) Emulsion   (D) Aerosol
 <$>

 (Q.39) <#> Separation technique used for two or more miscible liquids having difference in their boiling points
(A) Centrifugation   (B) Evaporation (C) Chromatography   (D) Fractional distillation
 <$>

 (Q.40) <#> Name the metal that is liquid at room temperature.
(A) Sodium   (B) Mercury   (C) Potassium   (D) Magnesium
 <$>

(Q.41) <#> Metals are ductile. This means:
(A) Metals can be drawn into wires   (B) Metals can be hammered into sheets
(C) Metals produce ringing sound   (D) Metals are good conductors

 <$>

 (Q.42) <#> Which of the following is a poor conductor of heat and electricity?
(A) Sodium   (B) Silver   (C) Gold   (D) Carbon
 <$>
(Q.48) <#> What do you understand by filtration ?
 <$>

(Q.49) <#> What is crystallization ?
 <$>

(Q.50) <#> Define colloid.
 <$>

(Q.51) <#> What is meant by a suspension ?
 <$>

(Q.52) <#> What is a saturated solution ?
 <$>
(Q.53) <#> Define Solution.
 <$>
 (Q.54) <#> What is meant by a mixture ?
 <$>

(Q.55) <#> What do you understand by a pure substance ?
 <$>

(Q.57) <#> Define Alloys ?
 <$>

<2M>

(Q.43) <#> Which process would you use to separate colours in a dye ? Define the process.
 <$>

 (Q.44) <#> Classify the following into elements , compounds and mixtures-
(a) Soil, (b) Magnesium (C) Salt solution (d) carbon dioxide (e) Gold (f) Methane
 <$>

 (Q.45) <#> Fog and cloud are both colloidal in nature . How do they differ ?
 <$>

 (Q.46) <#> How would you confirm that a colourless liquid given to you is pure water?
 <$>

 (Q.47) <#> What is sublimation ? Give examples.
 <$>

 (Q.58) <#> What is What is chromate graphy? Write any two applications of it.
 <$>
(Q.71) <#> To make a saturated solution, 42g of sodium chloride is dissolved in100 g of water at 293K. Find its concentration at this temperature.
 <$>
<#> What is solubility? What is the effect of change of temperature on the solubility of a salt.
 <$>

<3M>
(Q.59) <#> A solution has been prepared by dissolving 5 g of urea in 95 g of water. What is the mass percent of urea in the solution ?
 <$>

(Q.60) <#> A compound is regarded as a pure substance but a mixture is not. Give reasons.
 <$>

 (Q.61) <#> How will you separate a mixture of mercury, water and benzene ?
 <$>

 (Q.62) <#> Distinguish between physical changes and chemical changes.
 <$>

 (Q.63) <#> Differentiate between homogeneous and heterogeneous mixtures.
 <$>

 (Q.64) <#> What are the two types of pure substances ? Explain.
 <$>

 (Q.65) <#> Give the properties of a colloid ?
 <$>

 (Q.66) <#> A solution contains 20 g of common salt in 160 g of water. Calculate the concentration in terms of mass and mass percentage of the solution.
 <$>

 (Q.67) <#> Give three examples of solution and mention its solute and solvent.
 <$>

(Q.70) <#> What are the properties of a true solution.
 <$>

<#> What are the properties of a suspension?
 <$>

<#>Name the process used for separation of the following mixtures

    i)   Gases from air (ii) Cream from milk   (iii) Colours in a die   (iv) Kerosene oil and water

    v)   Sand and Ammonium Chloride   vi) Acetone and water

    vi)   <$>

<#> How will you obtain different gases from air? Explain by drawing a flow diagram
 <$>

<5M>

(Q.68) <#> Distinguish between compound and mixture.
 <$>

(Q.69) <#> How will you separate iron filings, ammonium chloride and sand from their mixture ?
 <$>

<#>What are the applications of crystallization
 <$>

<#> Describe the process by which you will obtain the pure crystals of copper sulphate from the impure sample. In which way crystallization is better technique than evaporation
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