



CHEMISTRY

BOOKS - ICSE

PURE SUBSTANCES & MIXTURES; SEPARATION OF MIXTURES

Exercise I

1. Select homogeneous and heterogeneous mixtures from the following:

Salt solution, petrol and water, sand and charcoal, alcohol and water, air dissolved in water, air, sea water, fruit juices, mist, brass.



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2. Define the following with an example for each :

(a) Pure substance (b) Impure substance

(c) Alloy (d) Solution

(e) Heterogeneous mixture (f) Homogeneous mixture



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3. List four characteristics of a mixture.



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4. Give reasons :

(a) Why do sugar and water retain their individual properties in a sugar solution ?

(b) Why do petrol and water form a heterogeneous mixture ?

(c) Why does sulphur dissolve when carbon

disulphide is added to a mixture of iron and sulphur but not when it is added to iron sulphide ?



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5. Give two examples for each of the following types of mixtures.

A. solid-solid

B. solid-liquid

C. liquid-gas

D. gas-gas

Answer:



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6. Name the components present in the following mixtures :

A. Brass

B. Duralumin

C. Tap water

D. Bronze

Answer:



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7. State

(a) Three differences between water and air.

(b) Four differences between compounds and mixtures.



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Exercise II

1. Define :

(a) Filtration

(b) Sublimation

(c) Evaporation

(d) Crystallisation



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2. Why do we need pure substances ?



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3. Give one example for each of the following types of mixtures.

(a) Solid-solid heterogeneous mixture

(b) Solid-liquid heterogeneous mixture

(c) Solid-liquid homogeneous mixture



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4. Name the process by which the components of following mixtures can be separated.

- (a) Powdered glass and sugar
- (b) Chalk powder and iron filings
- (c) Chaff and grain
- (d) Salt and water
- (e) Wheat and sugar
- (f) Sand and camphor
- (g) Sugar and water



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5. Name :

(a) two substances which can sublime

(b) two substances soluble in water

(c) two substances insoluble in water

(d) four substances that can be used as filters.



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6. Give reasons

(a) Sand and saw dust cannot be separated by hand picking

(b) Magnet is used to separate a mixture of iron and sulphur.

(c) Alum is used in purification of river water.



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Objective Type Questions Fill In The Blanks

1. The substances that make a mixture are called itsOr.....



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2. Method to separate solid dissolved in water.



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3. Mist is amixture of droplets of water and air.



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4. Clay is separated from water by the method of.....



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5. When cereals are washed before cooking. water is separated from the cereals by.....



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6. Is a process to obtain a very pure form of a solid dissolved in a liquid



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7. Ammonium chloride can be separated from salt by (evaporation/ sublimation)



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8. The solid particles which remain on the filter paper are called and the liquid which passes through it is called.....



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9. The process of transferring the clear liquid layer above the solid particles which settle at the bottom of the container is known as.....



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10. Method to separate an insoluble solid from solid-liquid mixture.



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Objective Type Questions True Or False

1. A pure substance consists of only one kind of atom ormolecule.



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2. Common salt is separated from its solution in water bydecantation.



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3. Winnowing is a process to remove small stones fromgrains.



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4. Gold jewellery is a homogeneousmixture of metals.



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5. Air can be separated fromwater by filtration.



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6. Salt and air dissolved in wateradd taste to water.



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7. Steel is an alloy of iron andaluminium



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Objective Type Questions Multiple Choice
Question

1. The process of adding a chemical substance to help the suspended solid particles to deposit as sediment faster is called

- A. loading
- B. sedimentation
- C. decantation
- D. filtration

Answer:



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2. Salt is separated from sea water by

- A. evaporation
- B. sublimation
- C. crystallisation
- D. filtration

Answer:



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3. A mixture of mustard oil and water forms

- A. a compound
- B. a homogeneous mixture
- C. an alloy
- D. a heterogeneous mixture

Answer:



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4. A heterogeneous mixture is

- A. made up of only one kind of atom
- B. made up of only one kind of molecule
- C. made up of different kinds of atoms and molecules.
- D. that looks uniform.

Answer:



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5. Example of a homogeneous mixture is

A. distilled water

B. tap water

C. sand and water

D. sawdust and water

Answer:



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6. A set of mixture is

A. gold, common salt, water, alloy

B. alloy, ink, honey, icecream

C. alloy, mercury, air, sea water

D. milk, duralumin, brass, silver.

Answer:



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7. A gas dissolved in a liquid can be separated by :

A. filtration

B. boiling

C. using magnet

D. by crystallisation

Answer:



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8. Copper is not a part of the alloy :

A. brass

B. bronze

C. steel

D. duralumin

Answer:



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9. Which is not a mixture ?

A. sugar solution

B. tap water

C. milk

D. distilled water

Answer:



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Objective Type Questions Give One Word

1. The solid which is left on the filter paper after filtration.....



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2. The solid particles which separate out from.....



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3. The solid particles that settle at the bottom of the beaker in a heterogeneous mixture of a solid and a liquid.....



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4. The clear liquid which is poured out after sedimentation.....



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5. The technique used to separate the light particles from heavy particles using the flow of wind.....



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