

Class 6 chapter 4 Chemistry notes

TICK (✓) THE MOST APPROPRIATE ANSWER :

1. The solution of sugar in water is:

- (a) Element (c) Homogeneous mixture ✓
(b) Compound (d) Heterogeneous mixture.

2. Separation of common salt from its solution in water can be carried by:

- (a) Sublimation ✓ (b) Evaporation
(c) Crystallisation (d) Filtration

3. Kerosene and water can be separated by

- (a) Fractionating column (b) Separating flask ✓
(c) Chromatography (d) Distillation

4. Iodine and camphor are separated from their mixtures by:

- (a) Liquefaction (c) Distillation
(b) Sublimation ✓ (d) Filtration

5. Solutions which have uniform composition throughout are known as:

- (a) Heterogeneous solution (b) Homogeneous Solution
(c) Colloidal solutions (d) None of these

6. Grain and husk are separated by:

- (a) Winnowing ✓ (c) Sieving
(b) Hand-picking (d) Sublimation

7. Cream can be separated from milk by the process of:

- (a) Filtration (c) Centrifugation ✓
(b) Evaporation (d) Sieving

8. Alum is added in the process of:

- (a) Loading ✓ (b) Decantation
(c) Centrifugation (d) Filtration

FILL IN THE BLANKS :

1. A pure substance has variable melting and boiling points.

2. Sea water is a mixture of salt dissolved in water.

3. Smog is a mixture of smoke and fog.

4. The constituents of impure substance may be in fix ratio.

5. Constituents of a mixture can be separated out by physical means.

6. iodine can be separated from a mixture of iodine and common salt by the process of sublimation
7. winnowing is used to separate husk from wheat.
8. Tea leaves can be separated from its solution by sieving
9. When two solid components differ in their sizes, they can be separated by the process of sieving
10. A pure substance has only one kind of molecules

WRITE TRUE OR FALSE FOR EACH STATEMENT. REWRITE THE FALSE STATEMENTS CORRECTLY

1. Heterogeneous mixtures have uniform composition. False
2. Camphor sublimates on heating. True
3. Soluble solid substances can easily be separated from their solvents by distillation. False
4. Iron compounds can be separated from their mixtures by using magnets. true
5. Mixtures may be homogeneous or heterogeneous. False
6. Miscible liquids can be separated by separating funnel. True
7. In a mixture, no chemical reaction takes place. True
8. Distilled water is used for preparing medicines. True

GIVE REASONS FOR THE FOLLOWING :

1. During churning of milk, cream comes on top.

Centrifugation is done for separating the cream from milk in which the milk is churned in a closed container and the cream comes on top of the milk

2. Distilled water is the purest form of water.

When water is distilled, the various dissolved gases comes out of water and water is also freed from harmful germs. Distilled water is tasteless because it does not maintain any mineral salt and used for medical purposes.

3. iodine camphor can be separated from their mixtures by sublimation.

Iodine is volatile liquid and camphor is sublimable solid. Iodine and camphor are having low boiling points. These can be separated from each other by the process of sublimation.

4. Homogeneous solutions have uniform composition

In homogenous solution all the components of the mixture are uniformly mixed. In case of homogenous mixture, the particles are evenly distributed such that properties of the resulting mixture are uniform throughout.

DIFFERENTIATE THE FOLLOWING:

1. Homogeneous and heterogeneous mixture.

I) A mixture in which its constituent is distributed uniformly is called a homogeneous mixture whereas, a mixture in which its constituent is not distributed uniformly is called a heterogeneous mixture.

II) In homogeneous mixture the properties of resulting mixture are uniform throughout whereas in heterogeneous mixture the properties of resulting mixture are not uniform throughout.

2. Distillate and residue.

The volatile component which gets collected in the flask is known as distillate. The other component is known as residue.

DEFINE THE FOLLOWING :

1. Distillation

It is the process of obtaining a pure liquid from a solution when two liquids differ abruptly in their boiling points.

2. Volatile substances.

During distillation the substances with lower boiling points are called volatile substances.

3. Filtrate.

The clear liquid obtained from the suspension of an insoluble solid and liquid by the process of filtration is known as filtrate.

ANSWER THE FOLLOWING QUESTIONS :

1. Give two differences between a compound and a mixture.

COMPOUND	MIXTURE
Compounds are always homogeneous	Mixture may be homogeneous or heterogeneous
The constituent of a compound cannot be separated by physical means	The constituents of a mixture can be separated by physical means

2. How will you separate a mixture of iodine, iron-fillings and salt from a mixture?

When a magnet is brought near the mixture the iron fillings are attracted by the magnet and separated out. Iodine is a volatile substance so when iodine and salt are heated slowly iodine is distilled and separated out from salt.

3. What is loading? Explain the process of loading with alum.

The process in which an external agent is added to bring the process of sedimentation is known as loading.

In muddy water when alum is put as an external agent impurities (mud) together with alum settle and the clear water is obtained on the top of it.

4. Why do we use the following?

- (a) filter paper: Filter paper is used to remove insoluble solid components from liquid mixture.
- (b) alum: Alum is used as an external agent to bring the process of sedimentation more properly.
- (c) separating funnel: Separating funnel is used to separate two liquids which are not miscible with each other.
- (d) Sieve : Sieve is used to separate the smaller components from the bigger components in a mixture
- (e) sublimating flask: Sublimating flask is used to condense the sublimed solid on the upper part of it

5. How can you separate a mixture of iron filings and sulphur.

A mixture of iron filings and sulphur can be separated by a magnet, when a magnet is brought near the mixture, the iron filings are attracted by the magnet and sulphur is left over.

6. Give three reasons why constituents of a mixture are to be separated?

The reasons are: i) To remove undesirable materials from desirable material
ii) Removal of impure substances from pure substances
iii) to improve quality of the substance

PLEASE HELP SANJAM TO MATCH THE WORDS IN COLUMN 'A' WITH THAT IN COLUMN 'B' :

Column A	Column B
1. Sublimation (b)	(a) Alum
2. Centrifugation (d)	(b) Camphor and sand
3. Distillation (f)	(c) Colours of ink
4. Sedimentation (g)	(d) Churning of milk
5. Magnetic separation (e)	(e) Iron and sulphur
6. Loading (a)	(f) Salt in water
7. Chromatography (c)	(g) Muddy water

8. Winnowing (h)	(h) Grains for husk
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Fill up

1. The gases present in air separated by liquefying air and then slowly warming the liquid air
2. A mixture in which the constituents are distributed uniformly is called homogenous mixture.
3. Pure substance have fixed melting and boiling points.
4. Any solution is a homogeneous mixture of solute and solvent.
5. Milk is a mixture of carbohydrates, fats, proteins and minerals in water.

Write true or false :

1. Mixture is a pure substance. **False**
2. Alloys are homogeneous mixtures of two or more non-metals. **False**
3. Substances which is dissolved is known as solute. **True**
4. Gases present in air can be separated by physical means. **True**
5. Sea water is a mixture of salts and water. **True**

Name the following:

1. process by which farmers separate grains from husk. Winnowing
- 2 A process used to separate the magnetic substances from the mixture. Magnetic separation
3. A substance which is magnetic. Magnetic Substances
4. The process is which smaller components and bigger components are separated. Sieving
5. Process by which solid changes into vapours and vapours change back to solids. Sublimation.

Fill in the blanks with appropriate words:

1. Winnowing is used to separate husk from grain.
2. magnet is used to remove iron from mixture of iron and sulphur.
3. Camphor and naphthalene are sublimable substances.
4. Tea leaves are separated from tea by the process of sieving
5. sublimation is the process of isolating the constituent that make up the mixture.

Fill in the blanks with appropriate words :

1. The removal of the clear layer of the liquid without disturbing the settled solids is called decantation
2. Loading is the process in which an external agent is added to bring the process of sedimentation.
3. Evaporation is used to separate the mixtures in which one of the components is non volatile
4. The mixture of alcohol and water can be separated by using distillation
5. The volatile component which gets collected is the flask in known as distillate.

Give one word for the following:

1. Solution which collects in the beaker is known as. Filtrate
2. External agent added during loading. Alum
3. Method used to separate saw dust and water. Flotation
4. Process of obtaining pure liquids by using the difference in their boiling points. Distillation
5. Methods used to separate the components of ink. Chromatography