

ELEMENTS COMPOUNDS MIXTURES

DPP 1

1(a) What is a pure substance?

(b) State three characteristics of a pure substance.

(c) Pick out the pure substances from the following list :

(i) Sugar solution

(iii) Milk

(ii) Common salt crystals

(iv) Lead nitrate crystals

(v) Brass

(vii) Lime stone

(vi) Distilled water

(viii) Petrol

2. Sodium metal is a pure substance and so is sodium chloride, inspite of the fact that sodium chloride contains two different elements. Give one reason to explain your answer.

3. (a) What do you understand by the following terms? Give one example in each case.

(i) Element (ii) Normal elements (iii) Radioactive elements.

(b) State the number of normal elements

4. (a) State four characteristics of metals.

(b) State four characteristics of non-metals.

5. By giving two examples each, define :

(i) Metalloids (ii) Noble gases.

6. (a) What do you understand by the term compound?

(b) State four characteristics of a chemical compound.

7. (a) What do you understand by the term mixture?

(b) State four characteristics of a mixture.

(i) Heterogeneous mixture (ii) Homogeneous mixture.

8. (a) By giving two examples each define :

(b) What is an alloy? Name two alloys and state their constituents.

ELEMENTS COMPOUNDS MIXTURES DPP 2

1. Fill in the blank spaces with the appropriate words given within the brackets.

- (a) A pure chemical compound is _____
(homogenous/heterogeneous) in nature.
- (b) Constituents of a mixture can be separated by employing suitable _____ (chemical/physical) means.
- (c) The clear liquid obtained from a mixture of an _____
(soluble/insoluble) solid and a liquid by the process of _____
(filtration/decantation) is called filtrate.
- (d) The process of separation of different dissolved constituents of a mixture by adsorbing them over an appropriate _____
(adsorbent/absorbent) material is called _____
(filtration/chromatography).
- (e) A mixture of iodine and sand can be separated by the process of _____ (decantation/sublimation).

2. Match the statements in Column A, with the statements in Column B.

Column A

- (a) The process of removing coloured dyes from blue black ink.
- (b) The process of removing common salt from its aqueous solution.
- (c) The process of obtaining nitre crystals from an aqueous solution of nitre and common salt.
- (d) The process of obtaining drinking water from sea.
- (e) The process of removing suspended particles from river water.

Column B

Sedimentation

Fractional

crystallisation

Chromatography

Evaporation

Distillation

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DPP 3

1. "Water is a chemical compound". State reasons to prove it
2. "Air is a mixture". Is this statement correct? Give three reasons in support of your answer.
3. Sugar is regarded as a pure substance, but not a mixture. Give one reason
4. Give one example of each of the following types of mixture :
 - (i) A solid in solid (ii) A solid in liquid (iii) A solid in gas
 - (iv) A liquid in liquid (v) A gas in liquid (vi) A gas in gas.
5. (a) Define :
 - (i) Filtration (ii) Filtrate.
 - (b) Why common salt cannot be filtered from common salt solution?
6. (a) Define:
 - (i) Sedimentation (ii) Sediment
 - (iii) Supernatant liquid (iv) Decantation.
7. Define the following terms:
 - (1) Evaporation (2) Distillation (3) Fractional distillation
 - (4) Crystallisation (5) Chromatography