

Chapter 3: Elements, Compounds and Mixtures

Worksheet 1

1. Fill in the blanks.

- (i) Matter can be classified into pure and _____ substances.
- (ii) Elements can be divided into metals, nonmetals, noble gases and _____ .
- (iii) _____ colour of sulphur is visible in the mixture of iron and sulphur.
- (iv) _____ method is used to separate the mixture of immiscible liquids.
- (v) Ammonium chloride and sodium chloride are separated by _____.

2. Match the columns.

Column A

- (i) Chromatography
- (ii) Magnetic separation
- (iii) Sublimation
- (iv) Evaporation
- (v) Filtration

Column B

- (a) Sand and water
- (b) Sugar and water
- (c) Iron and sulphur
- (d) Components of ink
- (e) Iodine and sand

3. Name the following.

- (i) The material which is made up of only one kind of atoms or molecules having definite composition and properties.
- (ii) The number of atoms present in a molecule.
- (iii) This mixture has uniform composition throughout.
- (iv) This mixture does not have uniform composition throughout.
- (v) These methods are used to separate heavy insoluble solid components from liquid components present in a mixture.

4. Answer the following questions.

- (i) What does the atomicity of O_2 mean?
- (ii) Give one example of heterogeneous mixture.
- (iii) Name the method used to separate soluble nonvolatile solid component from a liquid component.
- (iv) Which method is used to separate a mixture of a large number of volatile miscible liquids?
- (v) Write one example of solid-solid mixture.

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Worksheet 2

1. Write T for true and F for false statement.

- (i) Iron and tap water are pure substances.
- (ii) The atomicity of H_2O is 3.
- (iii) Water can be separated into hydrogen and oxygen by passing an electricity.
- (iv) Compounds are heterogeneous substances.
- (v) The constituents of homogeneous mixtures cannot be separated into its constituents by physical methods.

2. Name the methods used to separate the constituents of following mixtures:

A mixture of sand, rice and dal; sand and water; salt from salt solution; sodium chloride and calcium carbonate; oil and water; alcohol and water; iron, sulphur and sugar

3. Fill in the blanks.

- (i) About _____ elements are known at present.
- (ii) Calcium carbonate is a _____ .
- (iii) Air is a _____ .
- (iv) _____ method can be used to separate insoluble solid components from liquid components.
- (v) _____ can be separated into its constituents by simple physical methods.

4. Answer the following questions.

- (i) How many radioactive elements are known?
- (ii) Are alloys homogeneous mixtures?
- (iii) Define homogeneous mixture.
- (iv) Give one example of gas-gas mixture.
- (v) Which method is used to separate mixture of sand and iron particles?