



# CREST Science Olympiad (CSO) Worksheet *for* Class 6



**Topic**

## Separation of Substances



@crestolympiads



info@crestolympiads.com



+91-98182-94134

## Worksheet on Separation of Substances

1. Which of the following statements describes the relationship between a pure substance and an element correctly?
  - a. A pure substance and an element are the same thing.
  - b. A pure substance is always an element.
  - c. An element is a mixture of pure substances.
  - d. While all elements are pure substances, not all pure substances are elements.
2. In a laboratory experiment, a mixture of iron filings and sulfur powder is heated strongly. What is the expected outcome of this experiment?
  - a. The iron filings will dissolve in the sulfur powder.
  - b. The sulfur powder will sublime, leaving the iron filings behind.
  - c. The iron filings will react with the sulfur powder to form a new compound.
  - d. The sulfur powder will melt, while the iron filings remain unchanged.
3. Among the given substances, which ones are compounds?
  - a. Iron, lemonade, oxygen, steel
  - b. Sugar, glass, carbon dioxide, oxygen gas
  - c. Paint, gold, milk, soil
  - d. Wood, ink, vinegar, bronze
4. What is the correct order for obtaining ethanol from a mixture of ethanol and water?
  - a. Boiling - Condensation - Collection
  - b. Condensation - Boiling - Collection
  - c. Collection Distillation - Boiling
  - d. Boiling - Collection -Condensation
5. Match the following methods of separation with their corresponding descriptions.

	Column I		Column II
1.	Filtration	A.	Separation of grains from stalks by beating or crushing
2.	Magnetic separation	B.	Separation of solid particles from a liquid or gas by passing it through a porous medium
3.	Winnowing	C.	Separation of magnetic substances from non-magnetic substances
4.	Threshing	D.	Separation of heavier or lighter components of a mixture by wind or blowing air

- a. 1:B, 2:C, 3:A, 4:D
- b. 1:C, 2:A, 3:D, 4:B
- c. 1D:, 2:C, 3:A, 4:B
- d. 1:B, 2:C, 3:D, 4:A

## Answer Key

1. d - While all elements are pure substances, not all pure substances are elements. This is because while elements are a type of pure substance made up of only one type of atom, pure substances can also include compounds made up of two or more types of atoms.
2. b - The sulfur powder will sublime, leaving the iron filings behind. Sublimation is the process in which a solid directly converts into a gas without going through the liquid state. In this experiment, when heated, the sulfur powder will sublime, turning into a gas and leaving the iron filings behind.
3. b - Compounds are substances made up of two or more elements chemically combined. Sugar is a compound composed of carbon, hydrogen, and oxygen atoms. Glass is a mixture of compounds but can be considered a compound itself. Carbon dioxide is a compound made up of carbon and oxygen atoms, and oxygen gas ( $O_2$ ) is a molecule with two atoms and can also be considered a compound.
4. a - In the of distillation process, the mixture is heated (boiling) to vaporize the ethanol. The ethanol vapours are then cooled (condensation) to convert them back into a liquid state. Finally, the liquid ethanol is collected.
5. d - Filtration: Separation of solid particles from a liquid or gas by passing it through a porous medium.  
Magnetic separation: Separation of magnetic substances from non-magnetic substances.  
Winnowing: Separation of heavier or lighter components of a mixture by wind or blowing air.  
Threshing: Separation of grains from stalks by beating or crushing.

**More Questions Coming Soon – Keep Learning!**



# Difference between Ordinary & Extra-Ordinary is that "Little Extra"

## Discover Our Ultimate Prep Kits!

### Buy Previous Years Papers

1. Login at [www.crestolympiads.com/login](http://www.crestolympiads.com/login)
2. Go to Dashboard -> Additional Practice -> Buy



### Buy Physical & Digital Workbooks at

<https://www.crestolympiads.com/olympiad-books>



### Buy Additional Practice

1. Login at [www.crestolympiads.com/login](http://www.crestolympiads.com/login)
2. After login, go to Dashboard -> Additional Practice -> Buy



@crestolympiads



info@crestolympiads.com



+91-98182-94134