

**ICSE Board**  
**Class VI Chemistry**  
**Sample Paper – 1 Solution**

---

**Question 1****1. (c) Carbon**

Organic chemistry is the study of carbon compounds.

**2. (d) Moseley**

Moseley discovered the modern periodic table.

**3. (a) Definite volume, no definite shape, highly compressible, least rigid**

Gas has definite volume, but no definite shape. It is highly compressible and least rigid.

**4. (b) Condensation**

The conversion of a gas into liquid is called condensation.

**5. (b) Protons and neutrons**

Nucleus of an atom consists of neutrons and protons.

**6. (a) Chemical formula**

Chemical formula is the representation of a substance by symbols.

**7. (b) Winnowing**

Winnowing method is based on the difference in weights of the solid particles.

**8. (a) Separating funnel**

Organic compound such as kerosene can be separated from water using a separating funnel.

**9. (b) Nitrogen**

The gas whose percentage is maximum in air is nitrogen

**10. (a) Solute**

In solution molecules of the dissolved solid are solute.

**11. (c) 78–79%**

The percentage of nitrogen in air is 78-79%.

**12. (b) Carbon dioxide**

Carbon dioxide gas is taken in during photosynthesis.

**13.(a)** 4°C

The density of water is maximum at 4°C

**14.(d)** Distillation

Distillation is used to obtain the purest form of water.

**15.(d)** Oxygen

The product of photosynthesis is oxygen

**Question 2**

**(A)**

1. Physics
2. Metalloids
3. Crystallisation
4. Photosynthesis
5. Saturated solution

**(B)**

1. Sedimentation is followed by decantation.
2. Matter has mass and occupies space.
3. Helium is used in observation balloons.
4. Chemical formula for calcium chloride is  $\text{CaCl}_2$
5. A pipette is a calibrated glass tube with openings at both the ends.

**Question 3**

**(A)**

Column A	Column B
1. Killing germs	a) Chlorine
2. Obtaining pure water	b) Distillation
3. Mendeleev	c) Periodic table
4. Luster	d) Metals
5. Marie Curie	e) Radioactivity

**(B)**

1. The figure shows sublimation. It is a process of separation of mixtures based on the difference between the sublimable and non-sublimable nature of solids.
2. The particles numbered 1 are sublimable solids, and the particles numbered 2 are non-sublimable solids.

**Question 4****(A)**

1. Handpicking
2. Decantation
3. Filtration
4. Separating funnel
5. Centrifugation

**(B)**

1. Element: An element is a pure substance and is made of one kind of atoms.  
Examples: Sulphur, Hydrogen, Oxygen
2. Condensation: The process in which a gas is converted into the liquid form is called condensation.
3. Heterogeneous mixture: A mixture in which the components or constituents are not uniformly distributed throughout its volume is called a heterogeneous mixture.
4. Boiling point: The boiling point is the temperature at which a liquid starts boiling. The boiling point of water is 100°C.
5. Vaporisation: The process in which a liquid is converted into the gaseous form is called vaporisation.

**Question 5****(A)**

1. Potassium hydroxide: KOH
2. Calcium chloride: CaCl<sub>2</sub>
3. Aluminium hydroxide: Al(OH)<sub>3</sub>
4. Sodium chloride: NaCl
5. Sulphuric acid: H<sub>2</sub>SO<sub>4</sub>

**(B)**

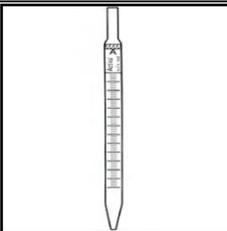
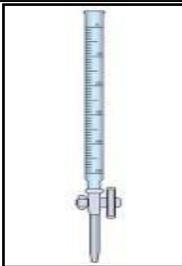
1. Liquid-liquid mixture : Lemon juice and water
2. Major branches of science: Physics, Chemistry and Biology
3. Separation by centrifugation: Cream from milk
4. Mixture of solid in liquid: Sea water
5. Separation by filtration: Separation of tea leaves from the liquid

**Question 6**

(A)

1. **False.** Metallic elements are ductile.
2. **False.** Solidification is not the same as condensation.
3. **True.**
4. **False.** During sublimation, solid changes into vapour.
5. **False.** Distillation is a process of separating a homogeneous liquid-liquid mixture.

(B)

Apparatus	Name
	Pipette
	Burette
	Test tubes
	Beaker
	Thistle funnel

**Question 7**

1.

<b>Solids</b>	<b>Liquids</b>	<b>Gases</b>
<ul style="list-style-type: none"> <li>• Solids have definite shape and volume.</li> <li>• Solids cannot be compressed.</li> <li>• Solids are highly rigid.</li> <li>• Solids cannot diffuse.</li> <li>• The space between the atoms in a solid is minimum.</li> </ul>	<ul style="list-style-type: none"> <li>• Liquids have definite volume but no definite shape.</li> <li>• Liquids can be slightly compressed.</li> <li>• Liquids are less rigid.</li> <li>• Liquids show diffusion.</li> <li>• The space between the atoms is more than that of solids and less than that of gases.</li> </ul>	<ul style="list-style-type: none"> <li>• Gases have no definite shape or definite volume.</li> <li>• Gases can be highly compressed.</li> <li>• Gases are least rigid.</li> <li>• Gases can easily diffuse.</li> <li>• The space between the atoms in a gas is maximum.</li> </ul>

2.

<b>Element</b>	<b>Compound</b>	<b>Mixture</b>
<ul style="list-style-type: none"> <li>• An element is made of one kind of atoms.</li> <li>• It cannot be broken down into simpler substances by any physical or chemical method.</li> <li>• Elements have their own set of properties.</li> </ul>	<ul style="list-style-type: none"> <li>• A compound is made of two or more kinds of atoms.</li> <li>• It can be broken down into simpler substances by chemical methods.</li> <li>• The properties of a compound differ from those of their elements.</li> </ul>	<ul style="list-style-type: none"> <li>• A mixture is made of two or more elements or compounds.</li> <li>• It can be separated by physical methods.</li> <li>• Mixtures have no definite set of properties.</li> </ul>

3.

<b>Metals</b>	<b>Non-metals</b>
<ul style="list-style-type: none"> <li>• Metals have lustre.</li> <li>• Metals are malleable and can be beaten into sheets.</li> <li>• Metals are ductile and can be drawn into wires.</li> <li>• Metals are good conductors of heat and electricity.</li> </ul>	<ul style="list-style-type: none"> <li>• Non-metals do not have lustre.</li> <li>• Non-metals are non-malleable and cannot be beaten into sheets.</li> <li>• Non-metals are non-ductile and cannot be drawn into wires.</li> <li>• Non-metals are poor conductors of heat and electricity.</li> </ul>