

LOYOLA SCHOOL, BHUBANESWAR

Half-Yearly Evaluation – September 2025

Class: VII

Subject: Chemistry

F.M.= 80

Time: 2 Hrs.

Question 01:

Choose the correct multiple from the following:

[15]

- (i) When a solid is heated it gets converted into a liquid, which on further heating gets converted into a gas. Then which of the following has the highest kinetic energy:
(A) Solid (B) Liquid (C) Gas (D) None of these
- (ii) Sublimation of camphor is a:
(A) Physical change (B) Chemical change (C) May be a physical or a chemical change.
(D) None of these.
- (iii) The types of change observed when the candle burns:
(A) Only physical change. (B) Only chemical change.
(C) Both physical and chemical change. (D) Data are insufficient.
- (iv) An example of homogeneous mixture is :
(A) Tap water (B) Distilled water
(C) sand and water (D) Water and oil
- (v) The element Y is chemically inert. Then Y must be a:
(A) Metalloids (B) Metals (C) Noble gas (D) Non-metal
- (vi) The solvent in which sulphur dissolves is :
(A) Water (B) Alcohol (C) Acetone (D) Carbon disulphide
- (vii) An irreversible physical change is :
(A) Burning of wood (B) Burning of candle (C) Breaking of a wooden stick
(D) Melting of ice
- (viii) Which one is the correct equation for the formation of a chloride ion?
(A) $\text{Cl} - 1\text{e}^- \rightarrow \text{Cl}^-$ (B) $\text{Cl} + 1\text{e}^- \rightarrow \text{Cl}^-$ (C) $\text{Cl}^- - 1\text{e}^- \rightarrow \text{Cl}$ (D) None of these
- (ix) The charge of the nucleus of an atom is:
(A) Positive (B) Negative (C) Neutral (D) Data insufficient.
- (x) Which of the following is a non-metallic polyatomic cation:
(A) nitrate ion (B) aluminium ion
(C) ammonium ion (D) Chloride ion
- (xi) Atoms of same kinds combine to form molecule of:
(A) an element (B) a compound (C) a mixture (D) None of these
- (xii) Which is not a character of a chemical change?
(A) It is permanent. (B) It is easily reversible.
(C) One or more new substances are formed. (D) None of these.
- (xiii) The liquid non-metal is:
(A) Bromine (B) Mercury (C) Gallium (D) None of these
- (xiv) Which one is a physical change?
(A) Condensation (B) Photosynthesis (C) Respiration (D) Rusting.
- (xv) Which statement is not correct about an element?
(A) It is made up of one kind of atom. (B) It has its own set of properties.

(C) It cannot be broken down by physical means.

(D) None of these.

Question 02

(a) Name the state of matter (SOLID, LIQUID OR GASEOUS).

[5]

- (i) It is not compressible and particles never diffuse.
- (ii) It has no free surfaces, and particles diffuse very fast.
- (iii) It has no definite shape and no definite volume.
- (iv) It has negligible intermolecular space.
- (v) It has a definite volume but does not have a definite shape.

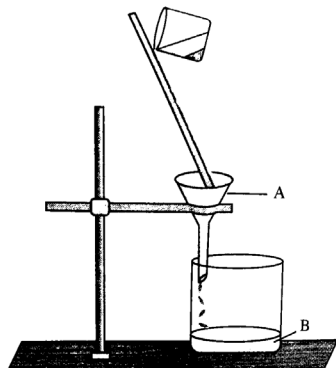
(b) Choose the correct word from the bracket and fill in the blanks.

[5]

- (i) The kinetic energy of the particles is maximum in _____. (solids/ gases)
- (ii) In a change, the composition of the molecules of the substance remains unaltered.
The change is a _____ (physical/ chemical) change.
- (iii) The imaginary paths in which electrons revolve around the nucleus are called ____ (orbits/ cells).
- (iv) The symbol of the calcium ion is _____ (Ca^+ / Ca^{2+}).
- (v) A trivalent negative radical is _____ (Phosphate/ Carbonate)

(c) Study the figure given below and answer the following questions :

[5]



- (i) Label A and B.
- (ii) Name the process shown.
- (iii) For what type of mixtures is this method used?
- (iv) What is the substance left on the filter paper called?

(d) Give one example of a homogenous mixture in each case:

[4]

- (i) Two solids
- (ii) Two liquids
- (iii) A solid with a liquid
- (iv) A liquid with a gas

(e) Write the symbol and valency of the following radicals :

[6]

- (i) Nitrate
- (ii) Dichromate
- (iii) Ammonium
- (iv) Sulphite
- (v) Acetate
- (vi) Bicarbonate

SECTION - II
(Attempt any four questions)

Question 03

(a) Name the process.

[3]

- (i) Conversion of a liquid into its vapour state at any temperature below its boiling point.
- (ii) Conversion of a liquid to its gaseous state at its boiling point.
- (iii) Conversion of a liquid state to its solid state.

(b) Fill in the blanks by choosing the correct word from the bracket.

[3]

- (i) The process of settling down of particles of an insoluble solid in a liquid is called _____ (decantation/ sedimentation).
- (ii) During dissolution of quicklime in water heat energy is _____ (absorbed/ evolved).
- (iii) The number of atoms present in a molecule of water is _____ (2 / 3).

(c) Classify as metals, non-metals, metalloids and Nobel gas:

[4]

Gold, boron, carbon, helium, silicon, silver, zinc, arsenic

Question 04:

(a) Name/ state a chemical change which takes place in presence of:

[3]

- (i) Electricity
- (ii) Light
- (iii) Heat

(b) Choose the correct answer from the table:

[3]

A. Composition of matter	B. Inter-particle space	C. Inter-particle force
D. Kinetic energy		

- (i) Particles of the matter pull each other with a force.
- (ii) Matter is made up of atoms, molecules or ions.
- (iii) The gaps existing between the particles of a matter.

(c) Name the main metal in the following:

[4]

- (i) Chalk (ii) Chlorophyll (iii) Chocolate wrapper (iv) Haemoglobin

Question 05:

(a) Give one point of differences between the following:

[3]

- (i) Desirable and undesirable changes.
- (ii) Basic radical and Acid radical.
- (iii) Periodic and non-periodic changes.

(b) Give an appropriate term for the following:

[3]

- (i) The liquid which evaporates and then condenses during the process of distillation.
- (ii) The change of vapour into a liquid.
- (iii) The number of atoms present in a molecule of an element.

(c) Classify the following as Physical or Chemical changes:

[4]

- (i) Drying of wet clothes

- (ii) Souring of milk
- (iii) Demagnetization of a magnet
- (iv) Slaking of lime

Question 06:

(a) Give reasons for the following :

[3]

- (i) Liquids and gases are called fluids.
- (ii) An atom is electrically neutral.
- (iii) Noble gases are also known as inert gases.

(b) Write the atomicity of the following elements:

[3]

- (i) Nitrogen (ii) Phosphorus (iii) Helium

(c) Give one example each of:

[4]

- (i) Liquid metal element
- (ii) Solid non-metal element
- (iii) Liquid non-metal element
- (iv) Gaseous non-metal element

Question 07:

(a) Give one example each of :

[3]

- (i) Mono atomic molecule
- (ii) Diatomic molecule.
- (iii) Tri atomic molecule

(b) Complete the table:

[3]

Particle	Charge	Mass in amu	Location in an atom
Proton	+ 1 unit	(i) _____	(ii) _____
(iii) _____	(iv) _____	1 amu	In the nucleus
Electron	(v) _____	Negligible	(vi) _____

(c) Match the following:

List – A (Mixture)

List – B (Separation method)

[4]

- (i) Ethyl alcohol + water
- (ii) Oil + water
- (iii) Salt + water
- (iv) Iodine + sand

- A. Separating funnel
- B. Evaporation
- C. Sublimation
- D. Fractional distillation