

Kanna Makhan Public School  
Class – 9<sup>th</sup> (20019-20)  
Subject – Chemistry  
Chapter-1 ( Matter in our surroundings)

M.C.Q's:-

1. Which is not a matter?

A) air      B) bread      C) cold      D) doll

2. \_\_\_\_\_ are highly compressible.

A) solids B) liquids C) gases D) all of them

3. The following is a sublime substance\_\_

A) ammonium chloride B) naphthalene C) camphor D) all of above

4. In village, people keep water in earthen pots in summer. It become cool due to

A) evaporation B) osmosis C)freezing D)diffusion

5. CNG is used now a days in

a) hospitals b) vehicles c) cooking

d) drinks

Very Short Questions:-

Q1. Name the process which occurs when a drop of dettol is added to water.

Q2. Define density and give its S.I. unit.

Q3. Can materials exist in all the three states?

Q4. Why do gases exert more pressure on the walls of the container than solids?

Q5. What do you understand by boiling point of a liquid?

Short Questions:-

Q1. Write the characteristics of particles of matter?

Q2. Give reasons for the following observations:-

i)Naphthalene balls disappear with time without leaving any solid.

ii)We can get the smell of perfume sitting several meters away.

iii) Water at room temperature is a liquid.

Q3. Define the following terms:-

i) Rigidity ii) fluidity iii) compressibility

Q4. Explain how the rate of evaporation of a liquid is affected with:-

i) increase in temperature of liquid,

ii) decrease in exposed surface area,

iii) increase in wind speed.

Long Questions:-

Q1. Distinguish between the three states of matter i.e., solids, liquids & gases.

Q2. How will you show that particles of matter have space between them?

Q3. Explain the following:-

- a) Solids have fixed shape. Rubber band is a solid but it can change its shape.
- b) Solids are incompressible. Sponge is a solid but it can be compressed.
- c) Solids are rigid. A heap of rubber material is a solid but it can be drawn into any shape.
- d) Mud is a solid but when mixed with water, it can be obtained in different shapes.
- e) Why are liquids and gases called fluids?

## CHAPTER-2 ( Is Matter Around Us Pure?)

M.C.Q's:-

Q1. Separation of the components is required-

- a) To remove undesirable component
- b) To obtain a useful component
- c) To obtain a pure sample of a substance
- d) All the above

Q2. Iodine is obtained from a mixture of iodine and salt by

a) distillation b) sieving c) loading d) sublimation

Q3. Two miscible liquids are separated by-

a) distillation b) sieving c) loading d) sublimation

Q4. Tyndall effect is not shown by-

a) true solution b) suspension c) colloidal d) all the above

Q5. Which of the following are chemical changes-

i) change of milk into curd ii) burning of candle iii) rusting of iron iv) melting of ice

a) (i), (ii) & (iii) b) (i), (ii) & (iv) c) (ii), (iii) & (iv)

d) (i), (iii) & (iv)

Very Short Questions:-

Q1. Name two (i) gaseous elements (ii) two liquid elements (iii) two solid elements.

Q2. What are metalloids? Give examples.

Q3. Define Tyndall effect? Give one example of solution which show Tyndall effect.

Q4. What is aerosol? Give an example.

Q5. Why does sky appear blue?

Short Questions:-

Q1. Draw a labelled diagram of water purification system in water works.

Q2. Explain the terms miscible and immiscible liquids with suitable examples.

Q3. 18g of Sodium Chloride is dissolved in 82g of water. Calculate the concentration of solution in terms of mass by mass percentage.

Q4. With the help of examples explain the terms solution, solute and solvent.

**Long Questions:-**

Q1. Differentiate b/w :-

i) true solution, colloidal solution & suspension solution

ii) physical & chemical change

iii) metals & non-metals

iv) compound & mixtures

Q2. State the principle of separating two immiscible liquids by separating funnel. Describe an activity with diagram to separate a mixture of water & kerosene oil.

### Unit – 3

#### M.Q.C.s

1. Latin name of iron is

a) Ferrous b) Ferrum c) Ferric d) None of the above

2. Numerical value of Avogadro's number is

a)  $6.022 \times 10^{23}$  b)  $6.022 \times 10^{20}$  c)  $6.022 \times 10^{-24}$  d)  $6.022 \times 10^{15}$

3. The same proportion of carbon and oxygen in CO<sub>2</sub> obtained from different sources proves the law of

a) reciprocal proportion b) Constant proportion c) multiple proportion d) conservation of mass

4. The atom is indivisible particle, was proposed by

a) Einstein b) Lavoisier c) Dalton d) Proust

5. Which of the following is/are diatomic molecules

a) oxygen b) hydrogen c) nitrogen d) chlorine

#### Very Short Answer Type Questions

1. Define the atomic mass unit.

2. How many atoms are present in a i) H<sub>2</sub>S molecule ii) PO<sub>4</sub><sup>3-</sup> ion?

3. What are polyatomic ions? Give examples.

4. Calculate formula unit mass of NaHCO<sub>3</sub>

5. The atomic number of three elements A, B and C are 9, 10, 13 respectively. Which of them will form a cation?

#### Short Answer Type Questions

1. Give three significance of mole.

2. What is a mole? What is the unit of mole? How many molecules are there in a certain mass of substance?

3. Calculate the number of molecules of sulphur (S<sub>8</sub>) present in 16g of solid sulphur?
4. Give names of the elements present in the following compounds
  - a) Quick lime
  - b) Hydrogen Bromide
  - c) Baking powder
  - d) Potassium Sulphate

### Long Answer type Questions

1. Calculate the molar mass of the following substances
  - A) Ethyne C<sub>2</sub>H<sub>2</sub>
  - b) Sulphur molecules (S<sub>8</sub>)
  - c) Phosphorus molecule P<sub>4</sub>
  - d) Hydrochloric acid HCl
  - e) Nitric acid HNO<sub>3</sub>
2. Write the chemical formulae of following
  - a) Magnesium Chloride
  - b) Calcium oxide
  - c) Copper nitrate
  - d) Aluminium Chloride
  - e) Calcium carbonate
3. State the laws of chemical combination.
4. Write postulates of Dalton's atomic theory.
5. Verify by calculating that
  - a) 5 moles of CO<sub>2</sub> and 5 moles of H<sub>2</sub>O do not have the same mass.
  - b) 240g of calcium and 240g magnesium elements have a mole ratio of 3:5

## Unit- 4

### M.Q.C.s

1. Which of the following correctly represent the electronic distribution of Mg atoms
  - a) 3,8,1
  - b) 2,8,2
  - c) 1,8,3
  - d) 8,2,2
2. Anode rays are produced when
  - a) Cathode is perforated
  - b) anode is perforated
  - c) when low voltage is passed
  - d) when pressure is high
3. The first model of an atom was given by
  - a) N. Bohr
  - b) E. Goldstein
  - c) Rutherford
  - d) J.J. Thomson
4. The number of electrons in an element X is 15 and the number of neutrons is 16. Which of the following is the correct representation of the elements?
  - a) X<sub>15</sub><sup>31</sup>
  - b) X<sub>16</sub><sup>31</sup>
  - c) X<sub>15</sub><sup>16</sup>
  - d) X<sub>16</sub><sup>15</sup>
5. The valency of Al with atomic number 13 is
  - a) 2
  - b) 3
  - c) 4
  - d) 1

### Very Short Answer Questions

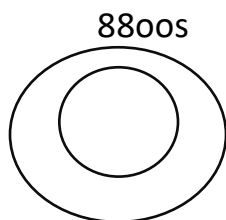
1. What are canal rays?
2. Draw a sketch of Bohr's model of an atom with three shells.
3. If no. of electrons in an atom is 8 and number of protons is also 8 then what is atomic number and charge on an atom?
4. Define valency by taking example of oxygen .
5. What is a molecule?

### Short Answer Type Questions

1. State the similar properties of isotopes.
2. What are the uses of isotopes?
3. Explain with examples
  - a) Atomic number
  - b) Mass no.
  - c) Isobars
4. What are the limitations of Rutherford's model of the atom?

### Long Answer type Questions

1. Compare all the proposed models of an atom.
2. Summarize the rules for writing of distribution of electrons in various shells for the first eighteen elements.
3. The given figure depicts the atomic structure of an atom of an element X.



Write the following information about the element X

- a) Atomic number of X
- b) Atomic mass
- c) Valance electrons
- d) Valency
- e) X should be metal or non metal.

UNIT-5 Chapter-14 Natural Resources

Ques 1. M.C.Q's :-

Q1. Soil erosion can be prevented by

- a) Raising forests
  - b) deforestation
  - c) excessive use of fertilizer
- c) Overgrazing by animals
- Q2. Oxygen is returned to the atmosphere mainly by
- a) Burning of fossil fuels
  - b) respiration
  - c) photosynthesis
- d) Fungi

Q3. Low visibility during cold weather due to

- a) Formation of fossil fuels
- b) unburnt carbon particles

c)Respiration d) none of these

### Very Short Questions

Q1.What makes the biosphere dynamic but stable system?

Q2.What is smog?

Q3.Give any two uses of ground water?

Q4.Name the two things essential for existence of life on Earth.

### Short Questions

Q1. A) Name the component of air that has maximum solubility in water.

B) What are the harmful effects of depletion of ozone layer?

Q2. Name the properties of potable drinking water.

Q3.What are the sources of oxygen in atmosphere?

Q4. How can we control soil pollution?

### Long Questions

Q1. Describe the steps with the help of labelled diagrams

i) Nitrogen cycle

ii) Oxygen cycle

iii) Carbon cycle

Q2. Explain the following:-

i) Soil pollution

ii) Water pollution

iii) Air pollution