

## MODEL PAPER CHEMISTRY CLASS 9

**Note:** Attempt all questions of Section A by filling the corresponding bubble on the MCQs RESPONSE SHEET. It is mandatory to return the attempted MCQs sheet to the Superintendent within given time.

### SECTION-A

**Time:** 20 Minutes

**Marks:** 12

- Which one of the following is homogeneous mixture?
  - Smoke
  - Air
  - Fog
  - Smog
- The gram molecular mass of  $\text{HNO}_3$  is:
  - 60
  - 100
  - 63
  - 98
- Mass of an atom is mostly due to its
  - nucleus.
  - neutrons.
  - electrons.
  - protons.
- Elements have similar chemical properties in a:
  - Period
  - Group
  - Row
  - Column
- An atom with a charge is called
  - an electron.
  - a molecule.
  - a metal.
  - an ion.
- Which of the following ions do not have the electronic configuration of an argon atom?
  - $\text{Ca}^{+2}$
  - $\text{S}^{-2}$
  - $\text{K}^+$
  - $\text{O}^{-2}$

7. Ink spreads in water because of:
- A. Vapour Pressure
  - B. Expansion
  - C. Diffusion
  - D. Compressibility of water
8. Water droplets in air is an example of solution:
- A. Gas in gas
  - B. Gas in liquid
  - C. Colloids
  - D. Liquid in gas
9. When KCl dissolves in water, which of the following will be produced?
- A. K and Cl
  - B.  $K^+$  and  $Cl^-$
  - C. K and  $Cl_2$
  - D.  $K^+$  and  $Cl_2$
10. Milk is an example of:
- A. Compound
  - B. Saturated solution
  - C. Colloids
  - D. Suspension
11. Oxidation number assigned to manganese in  $KMnO_4$  is:
- A. +7
  - B. +3
  - C. +2
  - D. +4
12. Which one of the following is NOT an alkali metal?
- A. Francium
  - B. Cesium
  - C. Rubidium
  - D. Radium

## SECTION-B

**Time:** 2 Hours 40 Minutes

**Marks:** 32

1. Attempt any **EIGHT** of the following short questions. Each question carries 4 marks
- i. Differentiate between atomic number and mass number with an example of each.
  - ii. Write electronic configuration of  $\text{Na}^{11}$ ,  $\text{Cl}^{17}$ .
  - iii. Why S-Block elements have two groups only?
  - iv. Differentiate between atomic radii and covalent radii.
  - v. Define Covalent Bond. Briefly explain its three types with examples.
  - vi. Draw the Lewis structure of  $\text{CO}$ ,  $\text{CCl}_4$ ,  $\text{SO}_2$  and  $\text{HCl}$ .
  - vii. Why a gas is compressible but a solid is not compressible? Give reason.
  - viii. Explain Molarity with the help of formulae.
  - ix. Define colloids and suspension. Give examples of each.
  - x. Define oxidizing and reducing agents. Give one example of each.
  - xi. Give **FOUR** differences between hard and soft metals.

## SECTION-C

**Marks:** 21

**NOTE:** Attempt any **THREE** of following questions. Each question carries 7 marks.

2. i. Describe Rutherford's Atomic model. 4
- ii. Calculate molecular mass of the following compounds. 3
- i. Benzene ( $\text{C}_6\text{H}_6$ )      ii. Ethane gas ( $\text{C}_2\text{H}_6$ )      iii. Iron oxide ( $\text{Fe}_2\text{O}_3$ )
3. i. Define electro negativity. Write two trends of electro negativity in groups and periods. 3
- ii. What is dative bond? Explain its formation. 4
4. i. What is evaporation? Write any **THREE** factors affecting evaporation. 3
- ii. Calculate molarity of solution composed of 5.85 grams of potassium iodide (KI) dissolved in enough water to make  $0.125 \text{ dm}^3$  of solution. 4
5. i. Explain principle, working and construction of Daniel Cell with the help of labeled diagram. 4
- ii. Describe inertness of Nobel metals. 3