ICSE Board
Class VIII Chemistry
Sample Paper – 4

Time: 2 hrs **Total Marks: 75**

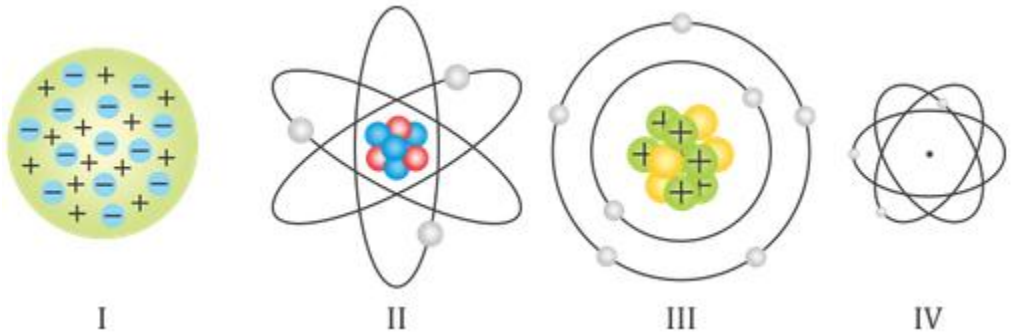
General Instructions:

1. ***All*** *questions are* ***compulsory****.*
2. *Questions 1 to 15 carry one mark each.*
3. *Questions in 2A and 2B carry one mark each.*
4. *Questions in 3A and 3B carry one mark each.*
5. *Question 4A and 4B carry five marks each.*
6. *Questions in 5A and 5B carry one mark each.*
7. *Questions in 6A and 6B carry one mark each.*
8. *Questions 7A and 7B carry five marks each.*

Question 1

Choose the correct answer out of the four available choices given under each question. [15]

1. Which of the following pictures represent the Bohr's model of an atom?



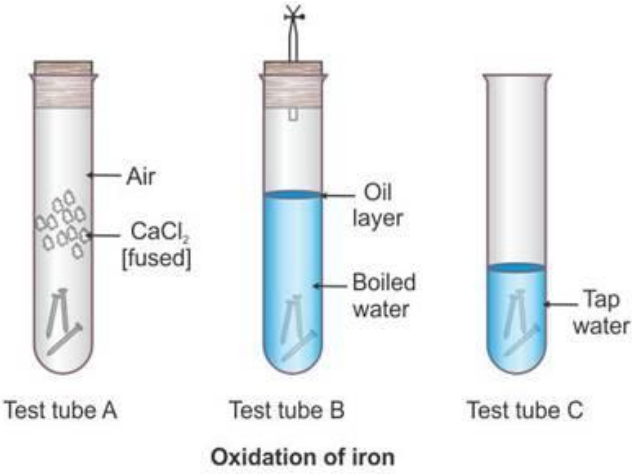
(a) I
(b) II
(c) III
(d) IV

2. Sodium forms sodium cation by loss of?
(a) One electron
(b) Two electrons
(c) Three electrons
(d) Four electrons

3. Hydrogen frees metals from their
(a) Sulphates
(b) Oxides
(c) Nitrates
(d) Chlorides

4. Which of the following metals starts floating in water when allowed to react with it?
(a) Sodium
(b) Calcium
(c) Potassium
(d) Iron

5. In which case will the iron nail not corrode?



Oxidation of iron

(a) Test tube A
(b) Test tube B
(c) Test tube C
(d) Both test tubes A and B

6. Which of the following is not a deliquescent substance?
(a) Concentrated sulphuric acid
(b) Sugar
(c) Common salt
(d) Copper sulphate

7. The process of sterilisation of water by the addition of chlorine which acts as a treatment against bacterial infection is
(a) Chlorination
(b) Precipitation
(c) Sedimentation
(d) Decantation

8. Which of the following is a solid fuel?
(a) Petrol
(b) Kerosene
(c) Coke
(d) Methanol

9. Allotropes have
(a) Similar chemical properties
(b) Similar physical properties
(c) Different chemical properties
(d) Similar physical and chemical properties

10. Allotropes have _____ properties.
(a) similar chemical
(b) similar physical
(c) different chemical
(d) similar physical and chemical

11. Substances used to determine whether a particular substance is an acid or a base are called
(a) Salts
(b) Indicators
(c) Reagents
(d) Catalysts

12. What will be the colour change when phenolphthalein is added to ammonium hydroxide?
(a) Pink
(b) Orange
(c) Colourless
(d) Green

13. Which is the correct balanced equation for the reaction between aluminium and hydrochloric acid?
(a) $Al + 3HCl \rightarrow AlCl_3 + 3H$
(b) $2Al + 3HCl \rightarrow Al_2Cl_3 + 3H$
(c) $2Al + 6HCl \rightarrow 2AlCl_3 + 3H_2$
(d) $Al + 6HCl \rightarrow Al_2Cl_3 + 3H_2$

14. What is the charge on an electron?

(a) -1
(b) +1
(c) -2
(d) +2

15. Conversion of a solid to a liquid on heating is

(a) Melting
(b) Condensation
(c) Condensation
(d) Freezing

Question 2

(A) State the electronic configuration of the following atoms: [5]

1. Atom 'A' (Atomic number = 12)
2. Atom 'B' (Atomic number = 19)
3. Atom 'C' (Atomic number = 7)
4. Atom 'D' (Atomic number = 26)
5. Atom 'E' (Atomic number = 10)

(B) Fill in the blanks and rewrite the sentences: [5]

1. When few drops of phenolphthalein are added to sodium hydroxide, the solution turns _____.
2. Separation of components of air such as liquid nitrogen and liquid oxygen is possible by _____.
3. The three states of matter are classified on the basis of differences in certain _____ properties.
4. A mixture which has different composition and properties in different parts of their mass is called a _____ mixture.
5. _____ is used in the laboratory for the preparation of hydrogen using dilute hydrochloric acid.

Question 3

(A) State whether the following statements are true or false.
Rewrite the false statement. [5]

1. A compound is a pure substance composed only of one kind of element combined chemically in a fixed proportion by mass.
2. A chemical reaction in which two or more substances combine to form a single product is called a combination reaction or synthesis.
3. In the formation of ammonia from hydrogen and nitrogen iron is used as positive catalyst.
4. Magnesium has atomic number 12 and atomic mass number 24.
5. The insoluble solid settels down in a beaker is called as sediment.

(B) Name the following:

1. Conversion of a solid to a liquid on heating
2. Conversion of a liquid to a vapour (or gas)
3. Conversion of a vapour (or gas) to a liquid
4. Conversion of a liquid to a solid
5. The outermost shell or orbit of an atom. [5]

Question 4

(A) Give distinguishing explanation between alpha rays, beta rays and gamma rays. [5]

(B) What is a metal reactivity series? What are its important features? [5]

Question 5

(A) Define the following: [5]

1. Lamp black
2. Sugar charcoal
3. Chemical equation
4. Orbit
5. Bone charcoal

(B) Match the name of the radical given in **Column A** with its formula given in **Column B**.[5]

Sr. No.	Column A (Name of the radical)	Column B (Formula)
1.	Chlorate	HCO_3^-
2.	Bicarbonate	MnO_4^-
3.	Bisulphate	Cu^{2+}
4.	Permanganate	ClO_3^-
5.	Cupric	HSO_4^-

Question 6

(A) Write the formula of the given compounds: [5]

1. Acetic acid
2. Sodium hydroxide
3. Sulphuric acid
4. Hydrochloric acid
5. Ammonium hydroxide

(B) Write the electronic configuration of the following elements: [5]

1. Sodium
2. Chlorine
3. Hydrogen
4. Nitrogen
5. Oxygen

Question 7

(A)

1. Differentiate between compound and mixture. [3]
2. What is atomicity? Give one example each of mono atomic and diatomic molecule.[2]

(B)

1. Give the chemical equations for a reaction of potassium with [2]

(a) Oxygen

(b) Water

2. Write the main features of Rutherford's atomic model. [3]