SEMESTER–ONE

CHEMISTRY

Class X

Sample Paper—2

Max. Marks: 50 **Time Allowed: 90 minutes**

General Instructions:

(i) This question paper consists of 40 questions in 4 sections.

(ii) Section A consists of 10 Objective type questions carrying 1 mark each.

(iii) Section B consists of 10 Fill in the blanks type questions carrying 1 mark each.

(iv) Section C consists of 10 True or False statement type questions carrying 1 mark each.

(v) Section D consists of 10 Short answer type questions carrying 2 marks each.

Section A

Select and write one most appropriate option out of the four options given for each of the questions 1–10.

1. How many base units are there?

(a) Three (b) Five

(c) Seven (d) None of these

2. In a laboratory, improper handling of chemicals and glassware can cause

(a) injury (b) accident

(c) both (a) and (b) (d) neither (a) nor (b)

3. The state of the matter that can be rapidly diffused is

(a) solid (b) liquid

(c) gas (d) none of these

4. Which of the following is an example of gas-gas mixture?
(a) Air (b) Sugar solution
(c) Sea water (d) None of these

5. Name the subatomic particles that are present in the nucleus of an atom.
(a) Electrons and protons (b) Electrons and neutrons
(c) Protons and neutrons (d) None of these

6. Who discovered proton?
(a) J.J. Thomson (b) James Chadwick
(c) E. Goldstein (d) Ernest Rutherford

7. In the modern periodic table the elements are arranged according to their
(a) Atomic size (b) Atomic number
(c) Atomic mass (d) None of these

8. The tendency of gaseous atom to form anion is expressed in terms of
(a) Ionization energy (b) Electron affinity
(c) Electronegativity (d) None of these

9. On moving down a group, the atomic size
(a) increases (b) decreases
(c) becomes stable (d) None of these

10. Which of the following is not a Group-7 element?
(a) Fluorine (b) Aluminium
(c) Bromine (d) Iodine

Section B

Fill in the blanks with a suitable word for each of the questions 11–20.

11. The phenomenon of metamorphosis of rocks is studied by _____ branch of chemistry.

12. If joule is the unit of energy than the unit of power is _____ .

13. There are _____ basic SI units.

14. The radius of atoms is of the order of _____ *m*.

15. *s*-orbitals are _____ in shape.

16. The orbitals having equal energy are called _____ orbitals.

17. The elements in a _____ have same valence shell.

18. Noble gases are the elements belonging to group _____ .

19. The elements of group 16 are known as _____ .

20. Transition metals belong to _____ block of the periodic table.

Section C

State whether the following statements are true or false for each of the questions 21–30.

21. The scientific method helps to organize thoughts and procedures.

22. Stapler and calculator are examples of laboratory apparatus.

23. Particles in a liquid are closely packed.

24. The change of state from solid to liquid is called condensation.

25. Dalton's atomic theory explains the law of chemical combination by mass.

26. An atom as a whole is electrically neutral.

27. Neutrons are experimentally discovered by James Chadwick.

28. The size of sodium ion is less than that of Mg^{2+} ion.

29. The electron affinity of fluorine is highest among halogens.

30. There are eight elements in the third period.

Section D

Answer each of the questions 31–40.

31. Write at least five symbols of atoms which were proposed by Dalton.

32. Write down the formulae of:

(i) aluminium chloride (ii) magnesium hydroxide.

33. Give the names of the elements present in the following compounds:

(i) Baking powder (ii) Aluminium chloride.

34. Define matter. Give some examples of matter.

35. What do you mean by a chemical change? State any two examples of chemical change.

36. Write down the main points of Dalton's atomic theory.

37. Explain the rules and principles for filling in electrons.

38. What is a group and a period of periodic table?

39. State the periodic law on which the modern periodic table based. Who proposed this law?

40. What are the elements of the first transition series? Write their common properties.