

SEMESTER—ONE

CHEMISTRY

Class X

Sample Paper—1

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. This branch deals with the study of compounds of other elements except carbon.
 - (a) Physical Chemistry
 - (b) Industrial Chemistry
 - (c) Inorganic Chemistry
 - (d) Bio-Chemistry
2. Which of the following is NOT an SI unit?
 - (a) kelvin
 - (b) metre
 - (c) ampere
 - (d) yard

3. Which of the following is a matter?
 - (a) Love
 - (b) Thought
 - (c) Cold
 - (d) Cold drink
4. Which of the following are physical properties of a matter?
 - (a) shape
 - (b) colour
 - (c) size
 - (d) All of these
5. In which change, one or more new substances are formed?
 - (a) Physical change
 - (b) Chemical Change
 - (c) Biological change
 - (d) None of these
6. Which of these are negatively charged particles?
 - (a) Electrons
 - (b) Protons
 - (c) Neutrons
 - (d) None of these
7. Who determined the charge to mass ratio of an electron?
 - (a) Robert Milikan
 - (b) Robert Boyle
 - (c) J.J. Thomson
 - (d) None of these
8. In Mendeleev's periodic table, the elements are arranged according to their
 - (a) Atomic size
 - (b) Atomic number
 - (c) Atomic mass
 - (d) None of these
9. Elements of Group-2 are called
 - (a) Alkali metals
 - (b) Alkaline earth metals
 - (c) Atomic mass
 - (d) None of these
10. The energy change occurring when one mole of a solid ionic compound forms in its gaseous state.
 - (a) Ionization energy
 - (b) Lattice energy
 - (c) Electronegativity
 - (d) None of these

Section B

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

11. Radiochemistry deals with the study of _____ substances.
12. A systematic error which makes all the measurements wrong by a certain amount is known as _____ .

13. Force is expressed in terms of unit newton (N). Its expression in terms of SI basic units will be _____ .
14. Alpha particle contains _____ protons.
15. The number of unpaired electrons in an atom of Mn ($Z = 25$) is _____ .
16. Specific charge of electron is _____ .
17. A horizontal row of periodic table is known as _____ .
18. A vertical column of elements in periodic table is known as _____ .
19. The elements in a _____ have same outer shell configuration.
20. Group 17 elements are known as _____ .

Section C

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

21. Joseph Gay Lussac stated the law of definite proportions.
22. We should not return chemicals or reagents to bottles.
23. Gaseous state of matter is highly compressible.
24. Physical change is reversible.
25. Sieving is used to separate mixture containing substances of different sizes.
26. Protons are negatively charged particles.
27. Mass number is different from relative atomic mass.
28. The ionization potential of Mg is larger than that of Na.
29. All transition elements are metals.
30. In their respective periods halogens are the strongest reducing agents.

Section D

Answer each of the questions 31–40.

31. Define chemistry.
32. Express the following in the scientific notation.
 - (i) 3,86,000
 - (ii) 9007
 - (iii) 0.02683
 - (iv) 9000.0
33. Write names of the compounds represented by the following formulae.
 - (i) K_2SO_4
 - (ii) KNO_3
34. What are the three states of matter?

35. What do you mean by a physical change? State any two examples of physical change.
36. What do you mean by isotopes? Give two examples of isotopes.
37. What do you mean by quantum number? What are the four kinds of quantum numbers?
38. What is the number of groups and number of periods in the long form of periodic table?
39. What property did Mendeleev use to arrange elements in the periodic table?
40. What are the common features of the electron structures of elements in: (i) Group 2 (ii) Period 3.