Class 11 Chemistry

Section A contains 10 questions of 1 mark each
Section B contains 5 questions of 2 marks each.
Section C contains 5 questions of 4 marks each.
Section D contains 6 questions of 5 marks each.

Section A

1. What are isobars? Give examples.

2. How Rutherford's model of atom is different from Thomson's model of atom?

3. What is octet rule?

4. Give the functional isomer of ethyl alcohol.

5. Name the chain isomers of C_6H_{14} which has a tertiary hydrogen atom.

6. State law of definite proportions.

7. Name the isotope, which is reference for atomic mass unit

8. Name the element which has highest electronegativity in the periodic table.

9. Define Boyle's law.

10. Give an example of electron deficient hydride

Section B

11. What is a black body? What are the characteristics of black body radiation?

12. How can you explain the formation of NaCl according to Kossel concept?

13. Show how hyperconjugation occurs in propene molecule.

14. Find the number of moles of 4.9g of sulphuric acid?

15. What is shielding effect? How it affects atomic size in lanthanides?

Section C

16. What is Hund's rule of maximum multiplicity? Explain by taking an example of nitrogen

17. Explain the main features of VSEPR Theory

18. On complete combustion of 0.246 g of an organic compound gave 0.198 g of carbon dioxide and 0.1014g of water. Determine the percentage composition of carbon and hydrogen in the compound.

19. The empirical formula of compound is CH_2O and vapour density of that compound is 45. Then find the molecular formula of that compound?

20. State Dalton's law of partial pressure? A 5 lit vessel contains equal masses of methane and helium at 760 mmHg pressure, find the partial pressure each gas?

Section D

21. What are quantum numbers? What permitted values can these have? Explain their significance.

22. Define ionic bond .Explain the factors that influence the formation of an Ionic bond with suitable examples.

23. (a) Explain the terms Inductive and Electromeric effects.
    (b) write the total structural isomers possible for $C_4H_{10}O$

24. a) What is meant molarity of a solution? What are its units?
    b) Calculate the molarity of H_2SO_4 in the solution prepared by dissolving 49 grams of it in

enough water to form 250 mL of the solution.

    c) Find the weight of sodium carbonate dissolved in 250mL of 0.1M Na2CO3 solution.

25. Explain the classification elements into 's,p,d & f' block elements. Explain with suitable examples. Write their general electronic configuration.

26. Define compressibility factor? Explain how the function PV/RT (Z) can be used to show gases behave non-ideally at different pressure