

SECTION "B" (Short Answer Question) Marks: 24

NOTE: Answer any EIGHT questions from this section.

Each question carries 3 marks.

2. Define the following terms:
(i) Periodicity (ii) Electronegativity (iii) Electrolysis
3. Write down three differences between Alkali metals and Alkaline earth metals.
4. The following statements belong to which branch of Chemistry? Identify:
(i) That chlorofluoro compounds are responsible for depletion of Ozone layer.
(ii) That investigates the properties of Ammonia gas.
(iii) That find out the quantity and quality of Paracetamol in Panadol tablet.
5. How do you prepare 100ml of 0.4M $MgSO_4$ from a stock solution of 2.0M $MgSO_4$?
6. What is atomic radius? Discuss its trend across the period and group in the periodic table.
7. What are isotopes? Describe briefly three isotopes of Uranium.
8. Balance the following chemical equations by inspection method:
(i) $CaCO_3 + HCl \rightarrow CaCl_2 + H_2O + CO_2$
(ii) $KClO_3 \rightarrow KCl + O_2$ (iii) $NH_3 + O_2 \rightarrow NO + H_2O$
9. Calculate the number of atoms present in 9.2 g of Calcium. (Atomic mass of Ca = 40)
10. Draw electronic dot and cross structures of following molecules:
(i) H_2 (ii) N_2 (iii) O_2
(Atomic number of H = 1, N = 7, O = 8)
11. Write down the chemical formulae of the following compounds:
(i) Caustic Soda (ii) Sand (iii) Sugar (iv) Lime Stone
(v) Gypsum (vi) Baking Soda
12. What is meant by Tyndall effect? How is it used for the identification of a true solution and a colloidal?
13. Justify the following:
(i) Why Fluoride ion is not considered as Neon atom?
(ii) Why noble gases do not react with other elements at ordinary conditions.

Section C (Detailed – Answer Question) (24)

NOTE: Attempt any FOUR questions from this section.

Each question carries 6 marks.

14. State Charles law. A 600 ml sample of gas is heated from $27^\circ C$ to $77^\circ C$ at constant pressure. What would be its final volume?
15. Define electroplating. Describe the Tin plating of an Iron spoon with the help of ionic equations. Draw its labelled diagram also.
16. Identify the highly electronegative group of Periodic table. Enlist the elements present in this group. Give three common characteristics of these elements.
17. Write down six postulates of Bohr's Atomic Model.
18. What is an ionic bond? Explain the formation of ionic bond between Sodium and Chlorine ionic compound Sodium chloride is formed.
19. What are molecules? Discuss its five types with examples.