

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

NOTE: Answer any E 3HT questions from this section.

All questions carries Three (3) marks.

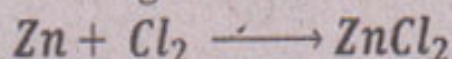
2. What is meant by the terms 'period' and 'group' with respect to periodic table. Identify period and group of ${}^7\text{N}$ and ${}^{11}\text{Na}$

3. Calculate the number of moles and number of molecules present in 45 grams of glucose ($\text{C}_6\text{H}_{12}\text{O}_6$).

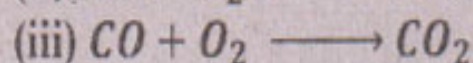
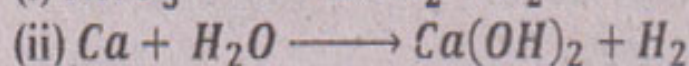
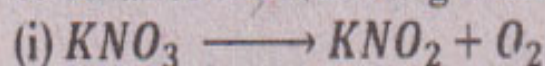
4. Write down the electronic configuration of the following elements:

(i) Carbon (ii) Fluorine (iii) Sodium

5. Define oxidizing and reducing agents. Identify oxidizing and reducing agents of the following chemical reaction.



6. Balance the following chemical equations by inspection method:



7. The pressure of a sample gas is 3 atm and the volume is 5 litre. If the pressure is reduced to 2 atm then what would be its new volume?

8. Write down three differences between amorphous solids and crystalline solids.

9. Define the following:

(i) Saturated solution

(ii) Unsaturated solution

(iii) Super saturated solution

10. Write down three important characteristics of covalent compounds.

11. How much sodium hydroxide (NaOH) is required to prepare 400cm^3 of 0.3 M solution?

12. Write down three properties of cathode rays.

13. Justify the followings:

(i) Most of ionic compounds are found in solid states.

(ii) Alkali metals form cation easily.

SECTION 'C' (Detailed - Answer Question) (24)

NOTE: Attempt any FOUR questions from this Section.

Each question tries (SIX) 6 marks.

14. Explain the corrosion of Iron and describe any four methods to prevent metals from it

15. Explain the importance of glues and epoxy resins in our society.

16. An atom has only one electron in its 'M' shell then what would be its atomic number? Identify that element and write four common characteristics of the group from - which it belongs to.

17. What is coordinate covalent bond? Explain it by the formation of Ammonium Ion (NH_4^+) and hydronium ion (H_3O^+)

18. Compare the characteristics of solution, colloid and suspension,

19. Define Charle's law of gases and explain mathematical representation of it.