

Note: Time allowed for section B and C is 2 hours and 40 minutes.

SECTION "B"

Marks: 32

II. Attempt any EIGHT Parts out of the following. Each Part carries equal marks.

- i. How many grams are present in 3 moles of Hydrogen and 2 moles of Chlorine?
- ii. What is the maximum capacity of electrons in s,p,d and f sub shell?
- iii. State whether the following elements are metals or non- metals.
Beryllium, Carbon, Sulphur, Sodium, Phosphorus, Nitrogen, Francium, Radium
- iv. What is the difference between Octet and duplet rule?
- v. Give difference between double and triple covalent bond with examples?
- vi. At 30°C, a gas sample take up 2.50L. if temperature is raised to 70°C and pressure remains constant, then what will be the new volume of a gas.
- vii. Identify Solute and Solvent in Sugar solution and sea Water.
- viii. What volume of water is required to make 0.3 molar solution from 90cm³ of 1.5 molar NaCl solution to make 0.5 molar solution.
- ix. Which type of electrode are used in dawn cell give the products formed during electrolysis of Molten NaCl.
- x. Explain chromium electroplating in terms of anodic and cathodic reaction
- xi.
 - a. Which two properties of gold and platinum are used for making jewelry?
 - b. How un-reactivity of platinum makes it useful?

SECTION "C"

Marks: 21

Note: Attempt any THREE questions of the following. Each question carries equal Marks.

- III.
 - (a) Calculate the formula mass of NaCl in a.m.u and convert it into grams? 3
 - (b) Draw the atomic structure of: ${}^1_1\text{H}$, ${}^2_1\text{H}$, ${}^{13}_6\text{C}$ and ${}^{12}_6\text{C}$. 4
- IV.
 - (a) Name the elements that make Group-Zero in periodic table. What specific term is used for them? 3
 - (b) Is Dative bond is an ionic bond or a type of covalent bond. Explain with the help of an example. 4
- V.
 - (a) How Boyle's Law is represented graphically and diagrammatically. 3
 - (b) What you know about unsaturated solution give suitable example? 4
- VI.
 - (a) Sodium acts as oxidizing or reducing agent. Explain with the help of examples. 3
 - (b) Write half cell reactions and overall reaction occurring in dry cell. 4