PR IX (01) 23

CHEMISTRY

9th (Fresh/Reappear)

Note: Time allowed for Section – B and Section – C is 2 Hours and 45 minutes.

Marks: 32

Section – B

Answer any EIGHT parts. Each part carries FOUR marks.

Q.1 How many grams are present in 4 moles of Potassium and 3 moles oaf Magnesium?

Q.2 Why did Rutherford's atomic model need to be replaced?

Q.3 Compare alkali and alkaline earth metals with reference to their location in periodic table.

Q.4 Which rule is followed by Oxygen and Helium to complete their valence shell and why they do so?

Q.5 With the help of dot cross structure show the formation of CH_4 and NH_3.

Q.6 A sample of Helium has an initial temperature of 0°C with initial volume of 153cm^3. The temperature is raised to 52°C. Calculate new volume of Helium.

Q.7 Identify the types of solution in the following examples:

(i) Alcohol in Water

(ii) Sterling Silver

(iii) Mercury Amalgam

(iv) Hydrogen gas absorbed at Palladium

Q.8 What molarity fo KNO_3 needed to make from 2 molar solution from 0.1 molar in 500ml.

Q.9 Write chemical reaction for ionization of Brine. Also write overall reaction when electrodes are connected to battery in Nelson's Cell.

Q.10 Explain the chemical reaction of electroplating. 0.077

Q.11 (a) Write any two uses of Gold Alloy.

(b) What do you know about Nobel metals?

Section – C

Marks: 21

Note: Attempt any THREE questions. All questions carry equal marks.

Q.12 (a) Find out formula mass of $NH_4H_2PO_4$ in a.m.u and also express it into grams? (3)

(b) Draw the atomic structure of: $^{235}_{92}U$, $^{35}_{17}Cl$, $^{14}_{6}C$ and $^{12}_{6}C$. (4)

Q.13 (a) Which group is known as Boron family in periodic table? Write the names of elements present in this group? (3)

(b) What is the role of electronegativity in the formation of bonds? (4)

Q.14 (a) Calculate the initial pressure of a sample of gas that is changed from 7.55dm^3 to 14.3dm^3 at 300 mm of Hg. (3)

(b) Differentiate between saturated and super saturated solution with the help of example. (4)

Q.15 (a) What is the purpose of sodium vapour lamp and desulphurization? (3)

(b) What are three main components of dry cell? (4)