CHEMISTRY SSC – I

Time allowed: 2:40 Hours | Total Marks: 53

SECTION – B (Marks 33)

Q. 2 Answer any ELEVEN parts. The answer to each part should not exceed three to four lines. (11 × 3 = 33)

(i) Define Molecular mass. Find the molecular mass of C_6H_{14} and C_2H_5OH if atomic mass of $C = 12, H = 1 \; and \; O = 16$

(ii) Write any two differences between Ions and Free radicals. Also write an example of each.

(iii) Write three conclusions drawn by Rutherford from his metal foil experiment.

(iv) Write the electronic configuration of the following elements by distributing electrons in their sub-shells (s, p, d, f):

a. $^{27}_{13}Al$ b. $^{35}_{17}Cl$ c. $^{20}_{10}Ne$

(v) Define Atomic size. Write the reason of increasing atomic size down the group and decreasing atomic size from left to right in the period of periodic table.

(vi) What is covalent bond? Show the formation of covalent bond between atoms in the following compounds with the help of cross and dot models:

a. CO_2 **b.** HCN

$(At.No. \; C = 6, \; N = 7, \; O = 8, \; H = 1)$

(vii) Define Charles's Law. Derive relationship $\frac{V}{T}$ = constant. Also show this relationship with the help of a graph.