PR X (A-I-B3) 25

CHEMISTRY

10th (Fresh/Reappear)

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

Section – B

Marks: 32

Answer any EIGHT parts. Each part carries FOUR marks.

Q.1 Find the value of K_c for the given reaction if the concentration of H_2 is 0.50 M, I_2 is 1.50 M and HI is 0.75 M. $H_{2(g)} + I_{2(g)} \rightleftharpoons 2HI_{(g)}$

Q.2 Discuss Bronsted-Lowary concept of acid and bases with reference to formation of NH_4^+ ion and H_3O^+ ion.

Q.3 Define mutation, its effect and causes. How they can be repaired?

Q.4 What is the role of arrangement of atoms and strength of covalent bond in diversity of organic compounds with examples?

Q.5 Write the reaction involves in the formation of Hexyl and Heptyl formed. Also write the name of alkanes from which they are formed.

Q.6 Differentiate between the C_4H_{10} (Butane) and C_4H_8 (Butene) molecule with the help of electron dot structure.

Q.7 Explain uses of lipids with reference to Integral part of cellular structure, solvent, manufacturing and hormones.

Q.8 What are the primary function of Vitamin A, Vitamin B, Vitamin K and Vitamin E?

Q.9 What is the effect of oxides of carbon, nitrogen and sulphur on fishes and wild life?

Q.10 What are the effects of hard water when used in boilers and for drinking?

Q.11 What is slag? What chemical changes occur in cuprous sulphide in blast furnace?

Section – C

Marks: 21

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

Q.12 (a) What are forward reaction explain with the help of example. (3)

(b) Give structural and condensed formulae of Butane and Butene. (4)

Q.13 (a) Write dissociation reactions of the following compounds. (3)

(i) HCl (ii) H_2SO_4 (iii) HNO_3

(b) Classify the following organic compounds into Ali-cyclic or aromatic organic compounds. (4)

(i) Cyclopentane (ii) Benzene

(iii) Napthalene (iv) Cyclobutane

Q.14 (a) Write dehydrohalogination reaction of adjacent dihalides. (3)

(b) Differentiate between ozone layer depletion and ozone hole. (4)

Q.15 (a) What are poly saccharides? Give example of poly saccharides present in plants and animal (one of each). (3)

(b) Mention the name of diseases that are caused by using polluted water containing arsenic and fluoride minerals? (4)