B. PHARMACY FIRST YEAR SECOND SEMESTER - 2024

PHARMACEUTICAL ORGANIC CHEMISTRY I

Time : 3 hrs Full Marks : 75

Group A

1. Write notes on: [3 x 5
   (i) MPV reduction
   (ii) Wolff Kishner reaction
   (iii) Bayer Villiger oxidation
   (iv) Tischenko reaction
   (v) Haloform reaction

2. Write preparation for: [3 x 5
   i) p-Bromo-benzaldehyde from p-Bromo-toluene
   ii) Indigotin from o-Nitrobenzaldehyde
   iii) Cinnamaldehyde from benzaldehyde
   iv) Salicylaldehyde from phenol
   v) O-Nitrobenzaldehyde from o-Nitro-toluene

Group B

3. What are the different methods of preparation of alkanes. Explain with suitable example. [15

4. a) Write a short note on SP^3 hybridization of Carbon. [7
   b) What happened when Chlorine react with methane in presence of UV light at high temperature. Explain with proper mechanism. [8

5. Answer ***any three*** of the followings.
   a) What happened when alkene react with cold and hot KMnO4 solution. [5
   b) Conformation of alkanes. [5
   c) What happened when alkene react with halogen acids like HBr. [5
   d) Draw the orbital structure of the following compounds. [5
   i) Ethylene, ii) Acetylene, iii) CH_2=NH, iv) HCN, v) CH_4

Group C

6. a) Discuss the acidity of carboxylic acids. Why carboxylic acids are more acidic than alcohol? [2 + 3 = 5
   b) Discuss the preparation of carboxylic acids. [10

7. a) Discuss the reactions of carboxylic acids. [9
   b) Write short notes on the following (***any two***): [3 + 3 = 6
   i) Benzyl benzoate ii) Salicylic acid iii) Succinic acid

8. a) Discuss the qualitative tests for carboxylic acids, carboxylic acid amides and carboxylic acid esters. [3 + 3 + 2 = 8
   b) Write an account on nomenclature and properties of carboxylic acids. [4 + 3 = 7