

B. Pharm. 1st Year 2nd Semester Examination, 2022
Subject: Pharmaceutical Organic Chemistry I (Theory)
Sub Code: BP202T

Full Marks: 75

Time: 3 hours

Answer any five questions taking at least one from each group.

Group A

1. a) Write a note on SP³ hybridization of Carbon. [10]
 b) Draw the orbital structure of the following compounds (any four). [5]
 i) Ethylene, ii) Acetylene, iii) CH₂=NH, iv) HCN, v) HCHO
2. a) What happened when Chlorine react with methane in presence of UV light at high temperature. Explain with proper mechanism. [10]
 b) Pyrolysis [5]

Group B

3. (a) Classify structural isomerism with suitable examples. [7]
 (b) Draw the structure of any four compounds. [8]
 i) Acetone ii) Formic acid iii) Cyclohexane
 iv) Ethyl-2-chloro-6-methyl heptanoate v) Ethanoyl Chloride
4. (a) Classify organic compounds with suitable example. [5]
 (b) Write IUPAC name of any five structures. [10]
 i) ClCH₂CH₂CH₂CH₂COCl ii) CH₃CH₂CH₂OCH₂CH₂CH₂CH₂CH₃
 iii) CH₃CH₂CH₂COOCH₂CH₃ iv) CH₃CH₂CH₂CH₂COCH₂CH₃
 v) CH₂=CHCH₂CH≡CH vi) CH₃CH₂CH₂NH₂

Group C

5. Write in details about the reactions of carboxylic acids. [15]
6. Discuss the structures and uses of the following: [5 x 3 = 15]
 i. Lactic acid ii) Benzoic acid iii) Salicylic acid iv) Acetyl salicylic acid
 v) Tartaric acid

Group D

7. Write a note on hydration of olefins. [15]
8. a) How do you prepare ethylene glycol? Discuss with chemical equations. [8]
 b) Write a short note on nomenclature of dihydric alcohols. [7]