

Ref. No.: Ex/BP202T/2022

**B. Pharm. 1<sup>st</sup> Year 2<sup>nd</sup> Semester Examination, 2022-23**  
**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 but not more than two

**Group A**

1. a) Conformation of alkane [7]  
b) Write a note on SP<sup>3</sup> hybridization of Carbon. [8]
2. a) What happened when Chlorine react with methane in presence of UV light at high temperature. Explain with proper mechanism. [8]  
b) What happened when Br<sub>2</sub> react with ethylene in presence of an inert solvent. Explain with proper mechanism. [7]
3. Answer *any three* of the following questions.  
a) Draw the orbital structure of the following compounds. [5]  
i) Ethylene, ii) Acetylene, iii) CH<sub>2</sub>=NH, iv) HCN, v) HCHO  
b) Cracking [5]  
c) Corey-House alkane synthesis [5]  
d) Peroxide effect [5]

**Group B**

4. Discuss the reactions of carboxylic acids with proper examples. [15]
5. a) Write in detail about the qualitative tests of carboxylic acids, carboxylic acid esters and carboxylic acid amides. [10]  
b) How do you prepare [2.5 x 2 = 5]  
i) Iodobenzene to phenyl acetic acid  
ii) Acetic acid to Propionic acid

**Group C**

6. Write a short note on nomenclature of monohydric alcohols. [15]
7. a) How do you prepare ethanol and methanol by specific methods? [8+7 = 15]  
b) Discuss the chemical properties of monohydric alcohols.
8. a) Discuss the syntheses of ethylene glycol with chemical equations. [7 + 8 = 15]  
b) Write on different physical and chemical properties of glycerol.