

**B.PHARM. DEGREE EXAMINATION  
FIRST YEAR  
PAPER II – PHARMACEUTICAL ORGANIC CHEMISTRY**

*Q.P. Code: 564252*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:** (2 x 20 = 40)

1. a) Describe the Kekule structure of Benzene. Write their resonance structure of Benzene.  
b) Elaborate the mechanism, kinetic, stereochemistry of Aliphatic Nucleophilic substitution reactions SN1 & SN2.
2. a) Write the preparation of Alkyl halides.  
b) Briefly enumerate the preparation and synthetic utility of Malonic ester.  
c) Write the properties of Alpha Beta unsaturated carbonyl compounds.

**II. Write notes on:** (8 x 5 = 40)

1. Explain Baeyer's strain theory and its limitations.
2. Explain Markownikoffs rule.
3. Give any five reactions of Anthracene.
4. Give the preparation and medicinal uses of Saccharin.
5. Describe the methods of preparation of Alcohols.
6. Explain Diels-alder reaction.
7. Write the preparation and synthetic utility of Grignard reagent.
8. Describe the mechanism of addition reaction of Conjugated dienes.

**III. Short answers on:** (10 x 2 = 20)

1. Define Resonance and Conjugation.
2. Draw the structure of Diethyl ether and Isopropyl alcohol.
3. What are chelating agents with examples?
4. Oxidation of primary alcohols.
5. Write two methods of synthesis of alkenes.
6. Define and classify hybridization with examples.
7. Huckel's rule.
8. Enumerate the functional derivatives of carboxylic acid.
9. Epoxides.
10. Medicinal uses of Iodoform and Lactic acid.