

**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) Discuss the mechanism, thermodynamics and kinetics of reaction of methane with halogen.  
b) Briefly enumerate the preparation and synthetic utility of acetoacetic ester.
2. Discuss the synthesis and chemical properties of cycloalkanes. Explain about Bayer Strain theory and Coulson and Moffitt's modification.

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

1. Write a detailed note on the Huckel's rule of aromaticity.
2. Explain the methods of synthesis of anthracene.
3. Write the preparation, test for purity and medicinal uses of amphetamine and acetanilide.
4. Explain briefly the generation and applications of carbocations.
5. Discuss briefly on functional derivatives of carboxylic acids.
6. Explain the free radical and electrophilic addition reactions of carbon carbon double bonds.
7. Write a note on basicity of amines.
8. Enumerate the hybridization pattern of alkanes.

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

1. Write a note on tautomerism.
2. Write about Peroxide effect.
3. Write any two chemical properties of Benzene.
4. Give the structural formula of lactic acid and glycol.
5. Write the structure of ethyl methyl ketone and ethylene oxide.
6. Write on Cannizaro reaction.
7. Malonic ester synthesis.
8. Carbanions.
9. Write one method of synthesis of alkyl halides.
10. Oxidation of primary alcohols.