

B. PHARMACY SECOND YEAR FIRST SEMESTER - 2025

PHARMACEUTICAL ORGANIC CHEMISTRY - II

Time : Three hours

Full Marks : 75

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

Group A

1. Write notes on: [3 x 5]
(a) The cumene-phenol process. (b) Acidity of phenols (c) Synthesis of picric acid
2. Give different reactions of diazonium salts for preparation of different functional organic compounds [15]
3. How do you prepare: [3 x 5]
(a) p-Dinitrobenzene (b) Metanilic acid (c) p-Aminoazobenzene

Group B

4. a) Discuss Bayer Strain Theory of cycloalkanes. What are the limitations of Bayer Strain Theory? [7+3]
b) Naphthalene undergoes electrophilic substitution reaction at both alpha and beta positions. But alpha product predominates-why? [5]
5. Answer **any three** of the following questions. [5]
a) Haworth synthesis of Naphthalene [5]
b) Pschorr synthesis of Phenanthrene? [5]
c) Write notes on conformation of cyclohexane. [5]
d) How will you prepare α - and β - naphthols?
6. a) How will you prepare cycloalkanes using *Simmons-Smith Reaction*, *Clemmensen Reduction* and *Dieckmann reaction*? [9]
b) Answer the followings (**any two**) [2x3=6]
i) Friedel-Crafts Acylation of Naphthalene.
ii) Reduction of Naphthalene.
iii) What happened when Anthracene is treated with conc. Sulphuric acid at low temperature and high temperature respectively.
7. Write details about the different methods of preparation of Anthracene. [15]