

**B. PHARMACY SECOND YEAR FIRST SEMESTER - 2024**

**PHARMACEUTICAL ORGANIC CHEMISTRY - II**

**Time : 3 hours**

**Full Marks : 75**

Answer any **FIVE** taking at least two from each group

**Group - A**

1. Write notes on: [3 x 5]  
(a) Cumene-phenol process; (b) Acidity of nitrophenols; (c) Steric inhibition of resonance
2. Give synthesis of: [3 x 5]  
(a) p-Dinitrobenzene; (b) m-Nitrophenol; (c) o-Bromoaniline
3. Discuss: [3 x 5]  
(a) Azo and diazo compounds; (b) Phenolic ethers; (c) Reactions of diazonium salts.

**Group B**

4. a) How will you prepare cycloalkanes using Wurtz reaction, Clemmensen Reduction and Dieckman Reaction? [9]  
b) Discuss Bayer Strain Theory of cycloalkanes. [6]  
**Or**  
Sachse Mohr's concept of cycloalkanes.
5. a) Conformation of cycloalkanes. [6]  
b) Haworth synthesis of Naphthalene [5]  
c) Naphthalene undergoes electrophilic substitution reaction at both alpha and beta positions. But alpha product predominates-why? [4]
6. Answer any **three**  
a) Sulphonation of Naphthalene [5]  
b) Friedel-Crafts Acylation of Naphthalene [5]  
c) Reduction of Naphthalene [5]  
d) Sulphonation and oxidation of Anthracene [5]