

B. PHARMACY SECOND YEAR FIRST SEMESTER - 2023

PHARMACEUTICAL ORGANIC CHEMISTRY - II

Time : 3 Hrs

Full Marks : 75

Answer any **five** questions taking at least **Two** from each group

Group A

Answers to the questions should be in the same order as they appear in the Question Paper.

1. Write notes on: [5 x 3 = 15]
 - (a) Synthesis of m-nitrophenol
 - (b) Reimer-Teimann and Gattermann reactions for phenol derivative synthesis
 - (c) Fries rearrangement

2. Give examples of: [5 x 3 = 15]
 - (a) Claisen reaction and Perkin reaction
 - (b) Stephen's method and Gattermann aldehyde synthesis
 - (c) Steric inhibition of resonance

3. Discuss relevant reactions for: [5 x 3 = 15]
 - (a) Replacement of the diazonium group by a halogen
 - (b) Replacement of the diazonium group by the cyano group
 - (c) Diazoamino-aminoazo rearrangement

[Turn over

B. Pharm 2nd Year 1st Semester Examination 2023
Sub: Pharmaceutical organic chemistry –II

Group B

1. a) Discuss Bayer Strain Theory of cycloalkanes. [6]
- Or**
- Sachse Mohr's concept of cycloalkanes.
- b) What are the limitations of Bayer Strain Theory? [3]
- c) Write notes on conformation of cyclohexane. [6]
2. a) Haworth synthesis of Naphthalene [5]
- b) How will you confirm Naphthalene is fused with two benzene rings? [5]
- c) Naphthalene undergoes electrophilic substitution reaction at both alpha and beta positions. But alpha product predominates-why? [5]
3. a) How will you prepare cycloalkanes using Clemmensen Reduction and Dieckman Reaction? [8]
- b) What happened (**any two**) [2x3.5=7]
- i) If anthracene is treated with sodium dichromate and sulphuric acid.
- ii) If Naphthalene is treated with conc. Sulphuric acid at 40°C and 165°C.
- iii) If Anthracene is treated with conc. Sulphuric acid at low temperature and high temperature.