

FEBRUARY - 2005

[KM 707]

Sub. Code : 4182

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper II — ADVANCED PHARMACEUTICAL  
ORGANIC CHEMISTRY

Time : Three hours                      Maximum : 90 marks

Sec. A & B : Two hours and            Sec. A & B : 70 marks  
forty minutes

M.C.Q. : Twenty minutes              M.C.Q. : 20 marks

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Outline the preparation and important chemical reactions of Triphenyl methane and Anthracene. Illustrate with suitable examples and their medicinal importance.
2. Discuss giving examples the synthetic utility.
  - (a) Reduction with hydrazine.
  - (b) Metal hydride reduction.
  - (c) Oxidation with perchloric acid.

3. (a) Define Walden inversion. Discuss the factors affecting mechanism of Walden inversion.  
(b) Write the stereochemistry of Biphenyl compounds.
4. (a) Outline the preparation and discuss the important chemical reactions of  
(i) Indole (ii) Quinoline  
Mention their medicinal importance giving example.  
(b) Discuss the following reactions with special reference to their mechanism :  
(i) Meerwin-Pondroff reduction.  
(ii) Beckmann rearrangement.

SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT questions.

5. The electrophilic substitution in naphthalene predominates at  $\alpha$  - position. Explain with example.
6. Describe the preparation of naphthalene from benzene.
7. Give a brief account of optical isomerism of Lactic acid.
8. Explain modern theory of Geometrical isomers.

9. Give the method of synthesis and discuss the aromaticity and orientation in Pyridine.
10. Illustrate, sequence rules for assigning R & S configuration to an optically active compound.
11. How do you synthesis of Anthracene from succinic anhydride? Describe.
12. How furan is synthesized? What will happen when furan is treated acetic anhydride and  $\text{BF}_3$ .
13. Electrophilic substitution in pyrrole takes place at 2-position, whereas in pyridine at 3-position. Explain.
14. Explain the stereochemistry of amines.