

OCTOBER - 2003

[KJ 707]

Sub. Code : 4182

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper II — ADVANCED PHARMACEUTICAL
ORGANIC CHEMISTRY

Time : Three hours Maximum : 90 marks

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

Twenty minutes for Sec. C Section C : 20 marks

Answer Sections A and B in **SAME** answer book.

Answer Section C in the Answer Sheet Provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Outline the preparation and chemical reactions of diphenyl methane and anthracene. Illustrate with suitable examples and mention their medicinal importance.
2. What are racemic modifications? Explain the techniques used for the resolution of racemic forms.

OCTOBER - 2003

3. (a) Explain the modern theory of double bonds.
(b) Explain the sequence rules relating the R & S configuration.
4. What happens when the following occurs? Mention the equation wherever necessary and explain.
(a) Indole is treated with acetyl chloride in the presence of Stannous Chloride.
(b) Thiophene is treated with a solution of nitric acid and acetic anhydride.
(c) Furan is treated with H_2 in the presence of Nickel.
(d) Pyrrole reacts with chloroform in the presence of alkali.
(e) Pyridine reacts with sodamide in liquid ammonia at $100^\circ C$.
5. Write the important reactions of Pyrrole.
6. Write the synthesis of the following :
(a) Fischer indole synthesis
(b) Hantzsch pyridine synthesis.
7. Write the structure and uses of the following :
(a) Chloroquin
(b) Nicotinic acid
8. Write notes on :
(a) Catalytic hydrogenation
(b) Beckmann rearrangement.
9. Distinguish between enantiomers and diastereomers.
10. Explain the hybridization of orbitals.
11. Electrophilic substitution in pyrrole takes place at 2-position, whereas in pyridine at 3 position explain.
12. Write notes on elements of symmetry.
13. Give a brief account of optical isomers of lactic acid.
14. Explain the modern theory of geometrical isomers.

SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT questions.

5. Write the important reactions of Pyrrole.
6. Write the synthesis of the following :
(a) Fischer indole synthesis
(b) Hantzsch pyridine synthesis.