APRIL - 2001

[KD 707] **Sub. Code : 4182**

SECOND B.Pharmacy DEGREE EXAMINATION.

(Revised Regulations)

Paper II — ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY

Time : Three hours — Maximum : 90 marks
Two and a half hours for Sec. A & Sec. B — Sec. A & Sec. B : 60 marks
Section C : 30 marks

Answer Sections A and B in the same Answer Book.

Answer Section C in the answer sheet provided.

SECTION A — ($2 \times 15 = 30$ marks)

Answer any TWO questions.

1. (a) Explain the modern theory of double bonds.

(b) Explain the sequence rules relating the R and S configuration.

(c) Draw and specify as R or S the enantiomers if any of

(i) 3–bromohexane

(ii) 3–chloro–3 methylpentane

(iii) 1,2–dibromo–2 methylbutane.

2. Write the synthesis and chemical reactions of (i) phenanthrene (ii) diphenylmethane (iii) naphthalene. Give the structure and uses of one medicinally important compound for each of the above series.

3. Explain the stereochemistry of Biphenyl compounds and Amines.

4. (a) What are racemic modifications? Explain the techniques used for resolution of racemic forms.

(b) Explain the conformation of Decalins.

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

5. Explain the conformation of cyclohexane.

6. Give the important reactions and synthesis of pyridine.

7. Give the structure and uses of

(a) Phenergan

(b) Sulphathiazole

(c) Tolazoline

(d) Phenytoin

(e) Nikethamide.

8. Give the nomenclature and synthesis of Indole and isoquinoline.

9. Explain the hybridisation of Orbitals.

10. Explain Beckmann rearrangement and Schmidt rearrangement.

11. Explain the reduction of carbonyl compounds using different reagents.

12. Explain the terms (a) Chiral (b) Enantiomers (c) Diastereomers (d) Optical isomers (e) Epimerisation.

13. Explain Walden Inversion with a suitable example.

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