NOVEMBER - 1994

[ND 571]

SECOND B.Pharm. DEGREE EXAMINATION

(Old Regulations)

Paper II — ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY

Time : Three hours. Maximum : 100 marks.

Answer ALL the questions.

All questions carry equal marks.

1. Write a detailed account on aromaticity, basicity, reacti- and the methods of synthesis of (a) pyrrole and

2. Discuss the analytical and synthetic evidences for the establishment of the structures of naphthalene and phenanthrene.

3. What is a racemic modification ? How is this obtained ? Explain the various methods with examples for the resolution of a racemic mixture.

4. Write a detailed note on :

(a) Walden inversion

(b) Asymmetric synthesis

(c) Stereochemistry of cyclic compounds.

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

(b) Explain the conditions and significance of restriction of rotation about a double bond.

(c) Write a note on the methods for the determination of configuration of Geometrical Isomers.

6. Write notes on :

(a) Elements of symmetry

(b) Evidences for the tetrahedral nature of carbon

(c) Configuration of diphenyl molecule.

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NOVEMBER - 1994

[ND 576]

SECOND B.Pharm. DEGREE EXAMINATION.

(New Regulation)

Paper II — ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY

Time : Three hours — Maximum : 90 marks

Two and a half hours for Section A and B — Section A and B : 60 marks

Answer Section A and B in separate answer books.

Answer Section C in the answer sheet provided.

SECTION A — (2 x 15 = 30 marks)

Answer any TWO questions.

1. (a) What are heterocyclic compounds? Write a note on classification, nature, numbering and nomenclature of heterocyclic compounds. (5)

(b) Outline the general method of synthesis for the following : (6)

(i) Furan (ii) Pyrimidine (iii) Indole (iv) Acridine.

(c) Write the skeleton structure and medicinal uses of one important compound each of above heterocyclics. (4)

2. Discuss the analytical and synthetic evidences for the establishment of the structures of Naphthalene and phenanthrene. (8 + 7)

3. Explain the following with relevant examples :

(a) Enentiomers and diastereomers.

(b) Elements of symmetry.

(c) Absolute configuration of an optical isomer. (15)

4. (a) What are geometrical isomers? Which type of compounds can exhibit this isomerism? (5)

(b) Write a note on the nomenclature of geometrical isomers with suitable examples. (5)

(c) Discuss the stereochemistry of cyclic compounds. (5)

SECTION B — (6 x 5 = 30 marks)

Answer any SIX questions.

Each question carries 5 marks.

5. Write preparation and reactions of triphenylmethane.

6. Discuss the two methods of synthesis of pyridine. Compare its important reactions with Benzene.

7. Write a method of synthesis of quinoline. Give the skeletal structure of two important derivatives each of quinoline used as antimalarial and antiamoebic.

8. Discuss the confirmational analysis of n-Butane.

9. Write a detailed note on asymmetric synthesis.

10. Resolution methods of a recemate.

11. Explain the methods to determine the configuration of a geometrical isomer.

12. Discuss the stereochemistry of Nitrogen compounds.

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