August 2008

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

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper II — ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY

Q.P. Code : 564182

Time : Three hours Maximum : 90 marks

I. Long Essays : (2 × 20 = 40)

Answer any TWO questions.

1. (a) Explain Meerwin-Pondroff reduction with its mechanism and synthetic application. (10)

(b) Write the skrup and fried lander's synthesis of quinoline. (10)

2. (a) Write synthesis and reactions of pyridine. (15)

(b) Write the structure, chemical name and use of the following compounds : (5)

(i) Phenergan

(ii) Chloroquin

(iii) Pipelazin

(iv) Phenytoin

(v) Primaquin.

3. (a) Explain stereochemistry of Biphenyl compounds. (10)

(b) Describe methods used for resolving racemic mixtures into optically active compounds. (10)

II. Short Notes : (8 × 5 = 40)

Answer any EIGHT questions.

(1) Write a note on elements of symmetry.

(2) Write Birch reduction with its mechanism.

(3) Describe two methods used for determination of the geometric configuration.

(4) Write a note on stereochemistry of amines and oximes.

(5) How will you synthesize naphthalene from benzene?

(6) Write a note on asymmetric synthesis.

(7) Write two synthesis of furan.

(8) Write a note on metal hydride reduction.

(9) Explain the following terms :

(a) Diastereomers

(b) Meso compounds.

(10) Write a note on modern theory of double bond.

III. Short answer : $(5 \times 2 = 10)$

Answer any FIVE questions.

(1) Explain why pyridine is more basic than pyrrole.

(2) Why pyrrole undergoes electrophilic substitution at 2- position?

(3) Why pyridine undergoes nucleophilic substitution at 2- position?

(4) Define tetrahedral carbon.



(5) Write structure and use of

(a) Nikethamide

(b) Isoniazid.

(6) Pyrrole is more reactive than furan. Suggest a reason.

(7) Write structure and use of Wilkinson's catalyst.

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**August 2008**

**[KT 741]** **Sub. Code : 4232**

SECOND B.Pharm. DEGREE EXAMINATION.

(Regulations 2004)

Paper III — ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY

Q.P. Code : 564232

Time : Three hours Maximum : 90 marks

I. Essay : $(2 \times 20 = 40)$

Answer any TWO questions.

(1) (a) What is conformational analysis? Explain different conformers with example.

(b) Explain the stereochemistry involved in six membered cyclic compounds. (6 + 14)

(2) Outline the preparation and discuss the important chemical reactions of

(a) Furan

(b) Indole

(c) Pyrrole. (6 + 6 + 8)

(3) Elucidate the structure of Ephedrine and papaverine with suitable chemical reactions.

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II. Short notes : $(8 \times 5 = 40)$

Answer any EIGHT questions.

(1) Write the convention used in stereo chemistry.

(2) Write a note on :

(a) Metalhydride

(b) Oxidation of lead tetra acetate.

(3) Explain the modern theory of double bonds.

(4) Stereochemistry of amines.

(5) Racemization of biphenyl compound.

(6) What is asymmetric synthesis? Explain with example.

(7) Write the synthesis of

(a) Huntzch pyridine synthesis

(b) Reinsert indole synthesis

(8) Write the structure and use of

(a) Resespine

(b) Atropine



(c) Quinine

(d) Camphor and

(e) Citral.

(9) General properties and reaction of amino acids.

(10) Discuss uric acid elucidation.

III. Short answer : $(5 \times 2 = 10)$

Answer any FIVE questions.

(1) Chirality.

(2) Stereo-selective synthesis.

(3) Conformational analysis.

(4) Chemistry of digitoxin.

(5) Perchloric acid

(6) Basicity of pyrrole.

(7) Isoprene rule.

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