

AUGUST - 2006

[KP 707]

Sub. Code : 4182

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper II — ADVANCED PHARMACEUTICAL
ORGANIC CHEMISTRY

Time : Three hours

Maximum : 90 marks

Theory : Two hours and
forty minutes

Theory : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

I. Long Essay :

Answer any TWO questions.

(2 × 20 = 40)

- (a) Define the term configuration and conformation.
(b) Discuss the stereochemistry of cyclic compounds. (8 + 12 = 20)
- (a) Write the classification and nomenclature of heterocyclic compounds.
(b) Give the method of synthesis and important chemical reactions of acridine. (8 + 12 = 20)

3. (a) Write notes on :

- Beckmann rearrangement.
- Darzein reaction.

(b) Write the method of synthesis and two chemical reactions of Naphthalene. Add a note on medicinal derivatives of Naphthalene. (8 + 12 = 20)

4. Write notes on :

- Walden Inversion.
- Stereochemistry of Amines and oximes.
- Skraup synthesis. (6 + 7 + 7 = 20)

II. Short notes on :

Answer any SIX questions : (6 × 5 = 30)

- Explain the isomerism exhibited by Maleic and fumaric acid.
- Write skeleton structure and medicinal uses of
 - Mepyramine.
 - Coramine
 - Antazoline
 - DEC
 - Pyrimethamine.
- Give the synthesis of
 - Phenothiazine
 - Isoxazole.

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4. Write notes on :
- (a) Elementary of symmetry.
 - (b) Chisality.
5. Write the products of the following reactions :
- (a) Pyridine + $\text{CH}_3\text{I} \rightarrow$
 - (b) Pyrrole + $\text{CHCl}_3 + \text{KOH} \rightarrow$
 - (c) Imidazole $\xrightarrow{\text{H}_2\text{O}_2} \rightarrow$
 - (d) Tetrahydrofuran $\xrightarrow{\text{NH}_3} \rightarrow$
 - (e) Thiophen $\xrightarrow[\text{Ni}]{\text{H}_2} \rightarrow$
6. Write notes on :
- (a) Circular dichroism
 - (b) Conventions used in stereochemistry.
7. Write synthetic applications of following reagents :
- (a) Lead tetra acetate.
 - (b) Aluminium Isopropoxide.
8. Give the method of synthesis of
- (a) Pyridine.
 - (b) Diphenylmethane.

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Sub. Code : 4232

SECOND B.Pharm. DEGREE EXAMINATION.

(Regulations 2004)

**Paper III — ADVANCED PHARMACEUTICAL
ORGANIC CHEMISTRY**

Time : Three hours Maximum : 90 marks

**Theory : Two hours and
forty minutes Theory : 70 marks**

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

I. Long Essay : (2 × 20 = 40)

Answer any TWO questions.

1. Explain any two methods for the synthesis of Indole and comments on their merits and demerits. Discuss the important reactions of pyrrole. Write a notes on configuration of biphenyl molecules. Give an account of geometrical isomerism.
2. Elucidate the structure of Ephedrine. Write any two methods for the preparation of aromatic amino acids. Discuss the chemistry of citral.

3. Discuss with examples the synthetic applications of

- (a) Reduction with hydrazine and its derivatives
- (b) Meerwin-Pondroff reduction
- (c) Metal hydride reduction.

4. (a) Write the general methods of determining the structure of terpenoids.

(b) Elucidate the structure of tropic acid in an atropine alkaloid.

(c) Write the classification of amino acids.

II. Short notes on any SIX: (6 × 5 = 30)

1. Write the methods of synthesis of pyridine.
2. Discuss with examples of stereo specific and stereo selective synthesis.
3. Write the stereochemistry of cyclic compounds.
4. Stereochemistry of nitrogen compounds.
5. Skraup synthesis of quinoline.

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- 6. Elements of symmetry.**
- 7. Birch reduction.**
- 8. Synthesis of polypeptides.**
- 9. Chemistry of Digitoxin.**
