February 2010

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

SECOND B.PHARM. DEGREE EXAMINATION
(ReRevised Regulations)
Candidates Admitted upto 2003-04
Paper II – ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY
Q.P. Code : 564182

Time : Three hours **Maximum : 90 marks**

I. Essay Questions : Answer any TWO questions (2 x 20 = 40)

1. Explain the following reactions: **a)** Meerwin – Pondroff reduction. **b)** Clemmensen reduction. **c)** Schmidt rearrangement. **d)** Birch reduction.
2. **a)** What are heterocyclic compounds? Write note on classification, nature and nomenclature of heterocyclic compounds. **(8)**
   b) Outline the general method of synthesis and anytwo reactions of the followings: **a)** Furan **b)** Pyridine **c)** Indole **d)** Quinoline **(12)**
3. **a)** Write the Haworth's synthesis of naphthalene, derivatives with their structure and uses. **(15)**
   b) Give a brief account of optical isomerism of Tartaric acid. **(5)**

II. Write Short Notes : Answer any EIGHT questions (8 x 5 = 40)

1. Explain Walden inversion with suitable examples.
2. Write any two methods for the synthesis of Triphenylmethane and Diphenylmethane.
3. Explain the mechanism and applications of Beckman rearrangement.
4. Write a notes on elements of symmetry.
5. Write important reactions of pyrrole.
6. Give an account on Asymmetric synthesis.
7. Write the structure and uses of **a)** Phenytoin **b)** Isoniazide **c)** Pyrimethamine **d)** Nikethamide **e)** Primaquine.
8. Explain the synthetic methods for acridine. Write the structure and use of medicinal compounds of acridine derivatives.
9. Discuss the stereochemistry of nitrogen compounds.
10. Give one method of synthesis and any two reactions of thiazole.

III. Short Answers: Answer any FIVE questions (5 x 2 = 10)

1. Define enantiomer and diastereomer,
2. Write the synthesis of phenothiazine.
3. Write the structure and use of : **a)** Chlorquine **b)** Sulphathiazole.
4. Define the following terms: **a)** Chirality **b)** Meso compounds.
5. Write a note on catalytic hydrogenation.
6. Explain one method for the synthesis of anthracene.
7. Define: **a)** Conformational analysis **b)** Atropisomerism.

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