(LI 4258) **FEBRUARY 2016** Sub. Code: 4258

SECOND YEAR B.PHARM. EXAMINATION
PAPER III – ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY

Q.P. Code: 564258

Time: Three hours **Maximum: 100 Marks**

I. Essay: **(2 x 20 = 40)**

1. Define racemic modification. Explain the various methods of resolution of racemic modification.

2. Define and classify heterocyclic compounds with examples. Explain the nomenclature of heterocyclic compounds. Write the methods of preparation and reactions of quinoline.

II. Short notes: **(8 x 5 = 40)**

1. Explain the stability of the possible conformations of disubstituted cyclohexane.
2. Explain sequence rules giving examples.
3. Compare and contrast Clemmensen reduction and Wolf Kishner reduction.
4. a) Explain the basicity of Pyrrole and Pyridine.
   b) Give any two electrophilic substitution reactions of furan.
5. Explain DL system of nomenclature. What are its disadvantages?
6. Discuss the chemistry and pharmacological activity of Ephedrine.
7. Define and classify Terpenoids. Add a note on the chemistry and uses of Thymol.
8. What are the applications of (a) Selenium oxide (b) Lithium Aluminium Hydride?

III. Short answers: **(10 x 2 = 20)**

1. Why Nitrobenzene is mostly used as oxidizing agent in Skraup synthesis?
2. What is 1, 3-diaxial interaction?
3. Write the structure and numbering of any two 5-membered heterocyclic compounds containing two similar hetero atoms.
4. Give the structure and numbering of (a) Isoquinoline (b) Phenothiazine.
5. Give one test for identification of the Steroidal Nucleus.
6. What are Sennosides?
7. Write any two reactions of Imidazole.
8. Define Enantiomers and Diastereomers.
9. Write the structure and uses of Vitamin B_1.
10. What do you mean by centre of symmetry? Explain with an example.

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