

**PY - 303**

**B.Pharm. III Semester**

Examination, December 2012

**Pharmaceutical Chemistry - IV**

**(Org - II)**

*Time : Three Hours*

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*Maximum Marks : 70*

*Note: 1. Attempt any five questions.*

*2. All questions carry equal marks.*

1. What is Hantzsch-Widman nomenclature system. Give a suitable example for fused and bridged heterocycles. 14
2. Classify heterocycles? Discuss reactivity and tautomerism in aromatic heterocycles. 14
3. Discuss the structure of Pyrrole. Discuss mechanism of action of electrophilic substitution reaction and its reactivity and orientation in pyrrole. 14
4. Give electrophilic and nucleophilic substitution reaction in pyridine along with their mechanism. Add a note on basicity of Pyridine. 14

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5. Explain sigmatropic rearrangement and cycloaddition reactions with suitable examples and their mechanism. 14
6. Give synthesis, chemical reactivity and medicinal applications of benzimidazole and benzothiazole. 14
7. Give 3 method of preparation for each- 14
  - i) Nitro compounds
  - ii) Cyanides
  - iii) Isocyanides
8. Notes on (any two). 7x2
  - i) Transition metal complex
  - ii) Neighboring group effect
  - iii) Coumarins

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