

# **2012 Scheme**

**QP CODE: 211006**

**Reg. No: .....**

## **Second Year B.Pharm Degree Supplementary Examinations July 2023**

### **Pharmaceutical Chemistry III (Advanced Organic Chemistry)**

**Time: 3 Hours**

**Total Marks: 100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers*
- *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essays**

**(3x10=30)**

1. Explain racemic mixture. Discuss the methods of resolution of racemic mixtures.
2. Write the definition, reaction, mechanism and applications of Beckmann rearrangement and Birch reduction.
3. Classify heterocyclic compounds with suitable examples. Describe the preparation of pyridine.

**Short notes**

**(14x5=70)**

4. Explain Walden inversion.
5. Explain the stereochemistry of  $\text{SN}_2$  reaction.
6. Explain the resonance structures of anthracene and phenanthrene.
7. Write the important reactions of furan.
8. Explain the preparations of indole.
9. Oxidation reactions of naphthalene.
10. Nomenclature of heterocyclic compounds.
11. Explain the oxidation reactions involving perchloric acid.
12. Explain the mechanism of Michael addition reaction.
13. Explain the general reaction of Meerwin-pondroff reduction and explain the mechanism.
14. Explain Mannich reaction. Explain its applications.
15. Explain the structure and nomenclature of oxepine, imidazole, quinoline, dibenzazepines and phenothiazine.
16. Explain the stereo chemistry of cyclic compounds.
17. Explain catalytic hydrogenation.

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