

# 2012 Scheme

QP CODE: 211006

Reg. No: .....

## Second Year B.Pharm Degree Supplementary Examinations January 2025

### 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. What are conformational isomers. Discuss on conformational analysis.
2. Write the definition, reaction, mechanism and applications of Hoffmann rearrangement and Meerwin-Pondroff reduction.
3. Explain the method of preparation and reactions of furan and quinoline.

#### Short notes

(14x5=70)

4. Explain chirality. Write their significance.
5. Explain the stereochemistry of E<sub>1</sub> and E<sub>2</sub> reaction.
6. Explain the resonance structures and reactivity of anthracene.
7. Explain the reactions of pyridine.
8. Explain the synthesis of pyrrole.
9. Reduction reactions of naphthalene.
10. Define and classify heterocyclic compounds. Explain its nomenclature.
11. Explain the oxidation reactions involving mercuric acetate.
12. Explain the mechanism of Michael addition reaction and Darzen's reactions.
13. Explain the general reaction of Clemmenson's reduction and explain the mechanism.
14. Explain Mannich reaction. Explain its applications.
15. Explain the structure and nomenclature of oxepine, indole, quinoline, dibenzazepines and phenothiazine.
16. Explain the stereo chemistry of amines.
17. Explain metal hydrate reduction.

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