

# 2010 Scheme

QP CODE: 201006

Reg. No: .....

## Second Year B.Pharm Degree Supplementary Examinations February 2024

### 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

#### Essay

(3x10=30)

1. Describe the synthesis and reactions of Pyrazole and Pyrimidine.
2. What is reduction reaction. Explain the reaction mechanism and applications of Clemmenson's reduction and Birch reduction.
3. Give a note on electrophilic substitution, reduction and oxidation reactions of naphthalene.

#### Short notes

(14x5=70)

4. Write a note on E and Z configuration.
5. Explain about stereochemistry of cyclic compounds.
6. Walden inversion with example.
7. Outline the sequence rule procedure with examples.
8. Explain rearrangement reactions.
9. Write the important applications of lead tetra acetate and selenium oxide.
10. Explain the mechanism and applications of Micheal addition reaction.
11. Explain the synthesis of pyrrole.
12. Outline the reactions of acridine and quinoline.
13. Furan undergoes electrophilic substitution preferentially at  $\alpha$ -position. Explain.
14. Describe the substitution reactions of thiazole.
15. Define and classify heterocyclic compounds with examples.
16. Describe the electrophilic substitution reactions of phenanthrene.
17. Give a note on aromaticity and electron density characteristics of anthracene.

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