

QP CODE: 112331

Reg. No:.....

**First Semester M.Pharm Degree Supplementary Examinations  
February 2022  
M.Pharm (Pharmaceutical Chemistry)**

**Paper II: Advanced Organic Chemistry I (MPC 102T)  
(Common for 2017 and 2019 Scheme)**

**Time: 3 Hours**

**Total Marks: 75**

- *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 nucleophilic Uni and Bi molecular reactions and write difference between SN1 and SN<sub>2</sub> reaction.
2. Explain the synthetic applications of BOP and Wilkinsons reagent.
3. Explain the reaction, mechanism involved in synthesis of Debus-Radziszewski Imidazole and Knorr pyrazole synthesis, Mention the synthesis of thioguanine.

**Short Notes**

**(9x5=45)**

4. Write about protecting groups and explain protection for the carbonyl groups.
5. Write the mechanism and synthetic applications of Michael addition reaction.
6. Explain basic principles, terminologies involved in Retrosynthesis.
7. Explain the method of formation, stability and synthetic applications of free radicals and Nitrenes.
8. Explain Ozonolysis with example.
9. Write the synthesis of Alprazolam and Mercaptopurine.
10. Explain C-X and C-C disconnections with examples.
11. Give synthetic applications of Osmium tetroxide and witting reagent.
12. Write the mechanism involved in Sharpless asymmetric Epoxidation with example.

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