BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M. PHARMACY **SEMESTER: I**
BRANCH: PHARMACY **SESSION: MO2025**

SUBJECT: MPC102T ADVANCED ORGANIC CHEMISTRY

TIME: 3.00 Hours **FULL MARK: 75**

INSTRUCTIONS:

1. The missing data, if any, may be assumed suitably.
2. Before attempting the question paper, be sure that you have got the correct question paper.
3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
5. Answer any five questions.

1a.	Explain SNi mechanism with evidences and equations	[7]
1b.	Elaborate (i) SN1 mechanism (ii Anchimeric assistance (iii) Neighboring group mechanism with equations only. Provide evidences where necessary	[8]
2a.	Elaborate the procedure of (i) Ugi reaction (ii)Ullmann reaction (iii) Michael addition reaction	[7]
2b.	Describe with reference to named reactions(i) Mitsunobu reaction (ii) Brook Rearrangement	[8]
3a.	Describe the preparation of these compounds: (i) Imidazole (ii) Pyrazole (iii) Quinoline	[7]
3b.	Illustrate the (i) Pinner Pyrimidine synthesis (iii) Ketoconazole	[8]
4a.	Provide evidences for SN2 reaction with equations	[7]
4b.	Elaborate synthesis of (i) Terconazole, (ii) Miconazole, (iii) Celecoxib, (iv) Hydroxychlorquine	[8]
5a.	Write the preparation and application of the following reactions: (i) Aluminium propoxide and (ii) N-bromosuccinimide	[7]
5b.	Write the preparation and application of the following reactions: (i) Wilkinson and (ii) Witting reagents	[8]
6a.	Discuss the strategy for protecting carbonyl groups in organic synthesis.	[7]
6b.	Discuss the strategy for protecting 1,2 and 1,3 diols in organic synthesis.	[8]
7a.	Discuss the general guidelines for dissecting organic molecules for devising a synthetic pathway adopting retrosynthetic principle.	[7]
7b.	Write a note on Functional Group Interconversion (FGI) with suitable example	[8]

::::::20/11/2025::::::M