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

CLASS: M. PHARMACY **SEMESTER: I**
BRANCH: PHARMACY **SESSION: MO2023**

SUBJECT: MPC103T ADVANCED MEDICINAL 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.	Characterize a prodrug. Enumerate the applications of prodrug approach with structures.	[7]
1b.	Explain the applications of analog based drug design with examples.	[8]
2a.	Explain about analogues based on homologous variations and isosteric variations.	[7]
2b.	Explain the following: (i) Competitive antagonism (ii) Differences between Covalent bond, hydrogen bond and van der waals interactions (iii) Hydrophobic bonding	[8]
3a.	Derive the Michaelis Menton equation and provide applications of the same.	[7]
3b.	Explain the following: (i) Different types of inhibition (ii) Affinity Label and Active Site Directed Irreversible Inhibitors	[8]
4a.	Define peptidomimetics and classify them with suitable examples	[7]
4b.	In detail discuss about peptidomimetics of following type: (i) Transition state analogues (ii) Cyclic peptides	[8]
5a.	Enumerate the biosynthetic pathway of prostaglandins	[7]
5b.	Enumerate the synthesis of any two COX-2 inhibitors	[8]
6a.	In detail discuss about the influence of optical isomerism on PK and PD of drug with suitable examples	[7]
6b.	In detail discuss about the influence of conformational isomerism on PK and PD of drug with suitable examples	[8]
7a.	Enumerate the synthesis of any two angiotensin receptor blockers	[7]
7b.	Enumerate the synthesis of any two newer anticonvulsant drugs	[8]

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