PAPER ID-310470

Roll No:

MPHARM
(SEM I) THEORY EXAMINATION 2025-26
ADVANCED MEDICINAL CHEMISTRY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Write note on chemistry of Leukotrienes.
b.	What are artificial enzymes? Mention one application.
c.	Explain in short agonist and antagonist.
d.	Differentiate between H_1 and H_2 receptor antagonists.
e.	Explain drug receptor interection with suitable example.
f.	Write short note on analog design.
g.	Explain in detail about causes for drug resistance.
h.	Describe classification of antineoplastic agents,
i.	Discuss the structure of prostaglandins.
j.	Differentiate between drug target identification and drug target validation

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Describe stages of drug discovery, explain method of lead discovery with suitable example.
b.	Classify antineoplastic drug describe mechanism of action of purine antagonist.
c.	Explain the basic concept and rationale of prodrug design. Discuss carrier-linked and bioprecursor prodrugs with suitable examples.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain COX-1 and COX-2 inhibitors with therapeutic significance
b.	Explain Explain the Michaelis–Menten equation and its significance in drug design.
c.	Explain bioisosterism and discuss classical and non-classical bioisosteres.
d.	Describe the stages of drug discovery with emphasis on lead identification and validation.
e.	Discuss the design of peptidomimetics by modification of peptide backbone.
f.	Describe the principles of enzyme inhibition and their importance in medicine.
g.	Explain the chemistry and biological role of tromboxones.