PAPER ID-312022

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM IV) THEORY EXAMINATION 2025-26
MEDICINAL CHEMISTRY I – THEORY

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.	Define partition coefficient and give its application.
b.	Give the structure and uses of methyldopa.
c.	Name any two ultra short acting barbiturates with uses.
d.	Write the chemical structures of phenytoin and valproic acid.
e.	Write the difference between narcotic and non-narcotic analgesics.
f.	Write the synthesis of ethosuximide.
g.	Write chemical structure and uses of ketamine hydrochloride.
h.	Compare benzodiazepines and barbiturates.
i.	Define antipsychotics.
j.	Define bioisosterism.

SECTION B

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

a.	Differentiate between sedative & hypnotics and classify them. Discuss the mechanism of action of benzodiazepines and barbiturates.
b.	Give the biosynthesis and catabolism of acetylcholine.
c.	Classify anti-inflammatory agents along with their mechanism of action. Write the synthesis of mefenamic acid.

SECTION C

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

a.	Discuss the classification and SAR of sympathomimetic agents.
b.	Classify anticonvulsants. Write the synthesis of carbamazepine.
c.	Define general anesthetics. Write the synthesis and mechanism of action of ketamine hydrochloride.
d.	Classify parasympathomimetic agent. Give the synthesis of carbachol.
e.	Explain phase I and phase II metabolism.
f.	Write the synthesis of tolazoline and propranolol.
g.	Classify cholinergic blocking agent. Give the synthesis of ipratropium bromide.