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

BPHARM
(SEM IV) THEORY EXAMINATION 2024-25
MEDICINAL CHEMISTRY I – THEORY

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

Note: 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 chelation.
b. Differentiate between classical and non-classical bioisosterism.
c. Write the mode of action of terbutaline.
d. Write the biosynthetic pathway of catecholamine.
e. Briefly describe the mode of action of prazosin,
f. Classify synthetic cholinergic blocking agents.
g. Differentiate between sedatives and hypnotics.
h. Draw the chemical structure of chlorpromazine and write mode of action
i. Write the synthetic route of mefenamic acid
j. Briefly describe dissociative anesthetics.

SECTION B

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

a. Define the physicochemical properties of molecules. Discuss about partition coefficient in relation to biological action.
b. Discuss the SAR of sympathomimetic agents and write the mode of action synthesis of salbutamol
c. Describe the SAR of benzodiazepines. Discuss the mechanism of action and synthesis of diazepam.

SECTION C

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

a. Discuss the SAR of parasympathomimetic agents with suitable examples.
b. Classify NSAIDs. Discuss the chemical structure mode of action and synthesis of mefenamic acid.
c. Describe geometrical isomerism in relation to affect biological activity.
d. Define epilepsy. Classify antiepileptic agents and the chemical structure of each class.
e. Describe in detail about general anesthetic agents with examples.
f. Discuss the SAR of opioid analgesics.
g. Write a short note biosynthesis and catabolism of acetylcholine.