Subject Code: BP402T

PAPER ID-411119

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

BPHARMA
(SEM IV) THEORY EXAMINATION 2023-24
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.	Discuss the significance of one physiochemical property of a drug that affects its protein binding in relation to biological action.
b.	Give the structure and uses of neostigmine.
c.	Give the synthesis of salbutamol.
d.	Give the structure and mechanism of action of any one atypical antipsychotic agent.
e.	Enumerate adrenergic receptors and their distribution.
f.	Outline the catabolism of acetylcholine.
g.	Define bioisosterism and its significance with the help of one example.
h.	Differentiate between anticholinergic and anticholinesterase agents.
i.	Name any two ultra-short acting barbiturates with uses.
j.	Illustrate the synthesis and uses of phenytoin.

SECTION B

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

a.	Differentiate between sedatives & hypnotics and classify them. Discuss the mechanism of action of benzodiazepines and barbiturates.
b.	Explain phase I and phase II metabolism in detail.
c.	Classify NSAIDs along with their mechanism of action. Write the synthesis of methadone.

SECTION C

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

a.	Illustrate optical and geometrical isomerism in relation to biological action of drug with suitable examples.
b.	Discuss the classification and SAR of sympathomimetic agents.
c.	Classify cholinergic blocking agents. Explain the SAR of cholinolytic agents.
d.	Explain SAR of anticonvulsant agents and synthesis of diazepam.
e.	Discuss cholinesterase reactivators and narcotic antagonists with their structure, mechanism of action and uses.
f.	Illustrate the synthesis and uses of propranolol and carbachol.
g.	How dissociative anaesthetics differs from other general anaesthetics? Discuss about synthesis, mechanism of action and uses of ketamine.