PAPER ID-311804

Subject Code: BP601T

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

BPHARM

(SEM VI) THEORY EXAMINATION 2025-26

MEDICINAL CHEMISTRY III – 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.	What is β-lactam antibiotics? Draw the chemical structure of Streptomycin.
b.	Define β-Lactamase inhibitors.
c.	Write the synthetic pathway involved in the preparation of Chloramphenicol.
d.	List examples of biguanides and illustrate their chemical structures.
e.	Draw the structure of Acyclovir and write the mechanism of action.
f.	Briefly describe the mechanism of action and therapeutic uses ofAmantadine hydrochloride.
g.	Illustrate the chemical structure and mechanism of action of Metronidazole.
h.	Define Quantitative Structure–Activity Relationship.
i.	Enlist the different molecular docking techniques used in drug design.
j.	Differentiate between solid phase and liquid-phase combinatorial chemistry.

SECTION B

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

a.	Discuss in detail about tetracycline and its SAR with suitable examples.
b.	Explain basic concept of prodrug. Describe its application with suitable examples.
c.	Describe structure activity relationship of quinolone. Explain synthesis of Ciprofloxacin and Nitrofurantoin.

SECTION C

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

a.	Classify synthetic antifungal agents. Describemechanism of action, synthesis and uses of Miconazole.
b.	Explain Hammett's electronic parameter in relation to drug design with examples.
c.	Explain in detail about cephalosporins with examples.
d.	Discuss chemistry, classification and SAR of Sulfonamides with suitable examples.
e.	Write the synthesis of Dapsone and trimethoprim.
f.	Describe the SAR of Quinolines.
g.	Define combinatorial chemistry and explain its application with examples.