

Ref. No.: Ex/BP601T/2025

B. PHARMACY THIRD YEAR SECOND SEMESTER EXAM 2025

Subject: Medicinal Chemistry-III

Paper Code: BP601T

Full Marks: 75

Time: 3 hr

Answer any Five questions taking at least one from each group

Group-A

1. Give an account of comparative molecular field analysis. [15]
2. Discuss steric substituent constants [15]
3. Write short notes on molecular docking and pharmacophore analyses. [15]

Group-B

4. a) Discuss the structure–pharmacokinetic relationships and structure–toxicity relationships of quinolone antibacterials. [3 + 3 = 6]
b) Outline the synthesis of the following:
Enoxacin, Cinoxacin [2.5 X 2 = 5]
c) Discuss the structures of Structures of DNA gyrase, and topoisomerase and mechanisms of quinolones. [4]
5. a) Write an account on the comparison between cell envelopes of mycobacteria and Gram (+) and Gram(-ve) bacteria. [5]
b) Discuss the structures, mechanism of action and adverse effects of rifampicin and rifamycin. [5]
c) Outline the synthesis of the following: [2.5 X 2 = 5]
i) Ethionamide from diethyl oxalate
ii) Pyrazinamide from glyoxal
6. a) Classify antihelmintics. [3]
b) Write about the choice of anthelmintics and their alternatives against various worms. [3]
c) Discuss the synthesis and mechanism of actions of the following: [3 X 3 = 9]
Levamisole, Albendazole, Praziquantel

[Turn over

B. Pharm 3rd Year 2nd Semester Examination-2025

Medicinal Chemistry-III

FM-75

BP-601T

Time-3 hrs

Answer any five questions taking at least two from group

(Group C)

1. a) Define and classify antibiotics with examples.
b) Discuss the history behind discovery of 1st antibiotic.
c) Mention the SAR and mode of action of penicillin.

4+5+6=15
2. a) Classify Cephalosporins with examples and atleast one structure of each class.
b) Outline synthesis of Amoxyicillin, Cephalothin, Chloramphenicol & Methicillin with their chemical names.

3+12=15
3. a) Draw the structural features of Tetracyclines.
b) Discuss the mode of action and SAR of Chloramphenicol and Cephalosporins.

5+5+5=15
4. a) Write a short notes on Macrolides.
b) Discuss the degradation of Penicillin and Cephalosporin under various chemical condition.

7+4+4= 15