

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 6 EXAMINATION – SUMMER-2025

Subject Code: BP601TP

Date: 09-05-2025

Subject Name: Medicinal Chemistry III

Time: 10.30 AM TO 01.30 PM

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Q.1 | (a) | Discuss the SAR of tetracyclines by giving suitable examples. | 06 |
| | (b) | What is XDR-TB? Write a short note on first-line anti TB agents. | 05 |
| | (c) | Give structure, IUPAC name and synthesis of Miconazole and Tolnaftate. | 05 |
| Q.2 | (a) | Discuss the chemistry and SAR of Penicillins. | 06 |
| | (b) | Write synthesis of Ciprofloxacin and Acyclovir. | 05 |
| | (c) | Describe malarial life cycle involving drugs acting on different stages. | 05 |
| Q.3 | (a) | Classify β -lactam antibiotics by giving at least one structure from each class. Explain mechanism of action of β -lactam antibiotics. | 06 |
| | (b) | Define Prodrugs. Write short note on application of prodrugs design. | 05 |
| | (c) | Give synthesis of Diethylcarbamazine citrate and Mebendazole. | 05 |
| Q.4 | (a) | Write IUPAC name and synthesis of Chloroquine and Pamaquine. | 06 |
| | (b) | What is combinatorial chemistry? Write in depth about different methodologies used for synthesis. | 05 |
| | (c) | Give Structure Activity Relationship of Cephalosporins. | 05 |
| Q.5 | (a) | Explain in detail about chemistry of Aminoglycosides. | 06 |
| | (b) | Discuss various physicochemical parameters used in QSAR. | 05 |
| | (c) | Give structure, IUPAC name and synthesis of Isoniazid and PAS. | 05 |
| Q. 6 | (a) | Give brief account on SAR and chemistry of macrolide antibiotics. | 06 |
| | (b) | Write Structure, IUPAC name and synthesis of Sulphamethoxazole and Trimethoprim. | 05 |
| | (c) | Discuss SAR of Fluoroquinolones. | 05 |
| Q.7 | (a) | Give classification of anti-HIV agents and write a brief note on NNRTIs. | 06 |
| | (b) | Write a short note on anti-protozoal agents. | 05 |
| | (c) | Give structure, IUPAC name and synthesis of Chloramphenicol. | 05 |
