

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. – SEMESTER VI – EXAMINATION – WINTER -2020

Subject Code: BP601TP**Date: 02/01/2021****Subject Name: Medicinal Chemistry III****Time: 02:00PM TO 04:00PM****Total Marks: 54****Instructions:**

1. Attempt any THREE questions from Q-1 to Q-6.
2. Q.7 is compulsory to attempt.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

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|------------|--|-----------|
| Q.1 | (a) Classify cephalosporin. Write a note on monobactam. | 06 |
| | (b) Define and classify prodrug with suitable examples. | 05 |
| | (c) What is QSAR? Write a note on Hansch analysis. | 05 |
| Q.2 | (a) What is combinatorial chemistry? Explain different methodologies used for synthesis. | 06 |
| | (b) Classify sulphonamides based on chemical structures. Outline synthesis of sulphamethoxazole. | 05 |
| | (c) Explain SAR of Sulphonamides. | 05 |
| Q.3 | (a) Classify antitubercular agent. Give synthesis of Isoniazid. | 06 |
| | (b) Write short notes on computer aided drug design. | 05 |
| | (c) Describe SAR of quinolines. Explain mechanism of chloroquine. | 05 |
| Q.4 | (a) i. Life cycle of malarial parasite | 06 |
| | ii. Macrolide antibiotic | |
| | (b) Write a note on applications of prodrug. | 05 |
| | (c) Write IUPAC name and synthesis of the following drugs : | 05 |
| | (i) Miconazole (ii) Mebendazole | |
| Q.5 | (a) Give brief note on antiviral agents. | 06 |
| | (b) Write the chemical degradation of penicillin with structures. | 05 |
| | (c) Explain SAR of quinolones as antibacterial agent. | 05 |
| Q.6 | (a) Classify and explain mechanism of action of azole antifungal agents. Draw structure of one drug from each class of it. | 06 |
| | (b) Write uses and synthesis of the following drugs : | 05 |
| | (i) Ciprofloxacin (ii) Acyclovir | |
| | (c) Draw general structure of tetracycline antibiotics. Explain mechanism of action and side effects of it. | 05 |
| Q.7 | (a) i. What is tissue amoebicide and luminal amoebicide? Give examples. | 06 |
| | ii. Outline the synthesis of metronidazole. | |
| | iii. What is anthelmintic? Explain mechanism of benzimidazole as anthelmintic. | |
| | OR | |
| | (a) Write a short note on aminoglycoside antibiotics. | 06 |
| | OR | |
| | (a) Give IUPAC name and synthesis of the following drugs : | 06 |
| | (i) Chloroquine (ii) Chloramphenicol | |