

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**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.

- 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 quinolones. 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