

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 7 EXAMINATION – SUMMER-2024

Subject Code: 2270003**Date: 04/05/2024****Subject Name: Pharmaceutical Chemistry – IX (Medicinal Chemistry - III)****Time: 02.30 p.m. to 5.30 p.m.****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) What are β -lactam antibiotics? Discuss Cephalosporins in detail. | 06 |
| | (b) Discuss SAR of Penicillins. | 05 |
| | (c) Write any two synthesis 1. Ciprofloxacin 2. Cholarmphenicol 3. Trimethoprim. | 05 |
| Q.2 | (a) Discuss SAR of Fluoroquinolones with chemical structures. | 06 |
| | (b) Write a note on anthelmintics. | 05 |
| | (c) Give SAR of sulphonamides and synthetic scheme of sulphacetamide. | 05 |
| Q.3 | (a) What are antineoplastic agents? Classify those agents. | 06 |
| | (b) Discuss macrolide antibiotic drugs in detail. | 05 |
| | (c) Write SAR of tetracyclines. | 05 |
| Q.4 | (a) Give a detailed note on synthetic and antibiotic anti-fungal agents. | 06 |
| | (b) What are anti-mycobacterial agents? Classify them in detail with structures. | 05 |
| | (c) Write any two synthesis 1. Ethambutol 2. Ketoconazole 3. Metronidazole. | 05 |
| Q.5 | (a) What are anti-malarial agents? Discuss SAR of Quinolines. | 06 |
| | (b) Write any two synthesis 1. Norfloxacin 2. Isoniazid 3. Clotrimazole. | 05 |
| | (c) Write a note on fluroquinolones. | 05 |
| Q. 6 | (a) Give Detailed note on following | 06 |
| | 1. Anti-protozoal agents | |
| | 2. Anti-amoebic agents | |
| | (b) Write classification of anti-viral and anti-HIV agents. | 05 |
| | (c) Write any two synthesis 1. Chloroquine 2. Cholrambucil 3. Tamoxifen. | 05 |
| Q.7 | (a) Enlist various models of QSAR? Discuss Hansch Linear Free Energy Relationship (LFER) model in detail. | 06 |
| | (b) Write various methods of lead discovery and its optimization. | 05 |
| | (c) Write a note on following | 05 |
| | 1. Molecular Modeling | |
| | 2. Combinatorial Chemistry | |
