

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM – SEMESTER – 7- EXAMINATION – WINTER - 2018**

**Subject Code:270003****Date: 19/11/2018****Subject Name: Pharmaceutical Chemistry-IX (Medicinal Chemistry)****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.**

- Q.1** (a) What are steroids? Give the structural classification of steroids. **06**  
(b) What are antifungal agents? How do they act? Sketch important steps for synthesis of Ketoconazole. **05**  
(c) Classify anti-neoplastic agents and sketch important steps for synthesis of Thiotepa. **05**
- Q.2** (a) Give IUPAC name and synthesis of (i) Fluorouracil and (ii) Cyclophosphamide. **06**  
(b) Write the main points elucidating the SAR of Quinolines. **05**  
(c) Sketch the structures of Nystatin and Amphotericin B. Mention its usage. **05**
- Q.3** (a) Explain the degradation of Penicillin and write a short note on penicillinase-resistant Penicillins. **06**  
(b) Draw chemical structures of iodinated compounds of thyroid glands. **05**  
(c) What are anabolic agents? Give SAR of testosterone. **05**
- Q.4** (a) What are Cephalosporins ? How do they differ from penicillins? Give SAR of Cephalosporins. **06**  
(b) Justify the name “Tetracyclines”. Elucidate its SAR. **05**  
(c) Write a short note on Rifamycin antibiotics. **05**
- Q.5** (a) Give life cycle of malarial parasite. Classify antimalarials with examples. Give synthesis of Primaquine. **06**  
(b) Sketch the important steps involved in synthesis of Isoniazid and Ethambutol. **05**  
(c) Write a note on immunomodulators OR Antithyroid drugs. **05**
- Q.6** (a) Classify Penicillins with examples on the basis of mechanism of action. Why Penicillin is not active against penicillinase secreting microorganisms? **06**  
(b) Explain the mechanism of action of Co-trimoxazole. Write synthesis of Trimethoprim and Sulfamethoxazole. **05**  
(c) Write the mechanism of action, metabolism, SAR and uses of Streptomycin. **05**
- Q.7** (a) What for are the neuraminidase inhibitors used? Mention its history and development. **06**  
(b) Give IUPAC name and chemical synthesis of Chloramphenicol. **05**  
(c) What are Quinolones? Write structure activity relationship of Quinolones. **05**

\*\*\*\*\*