Seat No.: _____ Enrolment No. _____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**B.Pharm - SEMESTER–VII • EXAMINATION – SUMMER - 2017**

**Subject Code: 2270003 Date: 03/05/2017**

**Subject Name: PHARMACEUTICAL CHEMISTRY-IX (MEDICINAL CHEMISTRY-III)**

**Time: 02:30 PM to 05:30 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)** | Briefly explain SAR of Fluoroquinolones. | **06** |
| | **(b)** | Write mechanism of action, uses and side effect of sulfonamide in detail. | **05** |
| | **(c)** | Write IUPAC name and Synthesis of following (Any two)<br>1. Sulphamethoxazole 2. Metronidazole 3. Ciprofloxacin | **05** |
| **Q.2** | **(a)** | Write detail SAR of Penicillins. | **06** |
| | **(b)** | Write short notes on cephalosporin antibiotic. | **05** |
| | **(c)** | What detail notes on macrolide antibiotics and aminoglycoside antibiotics. | **05** |
| **Q.3** | **(a)** | Write SAR of tetracyclines in detail. | **06** |
| | **(b)** | Briefly explain degradation of penicillin and tetracycline antibiotics. | **05** |
| | **(c)** | Write IUPAC name and Synthesis of following (Any two)<br>1. Chloramphenicol<br>2. Isoniazid<br>3. Chloroquine | **05** |
| **Q.4** | **(a)** | What are antitubercular agents ? Briefly explain first line antitubercular agents. | **06** |
| | **(b)** | Write mechanism of action, uses and side effect of antifungal agents with minimum one structure in each class. | **05** |
| | **(c)** | Write IUPAC name and Synthesis of following (Any two)<br>1. Clotrimazole<br>2. Albendazole<br>3. Amantadine | **05** |
| **Q.5** | **(a)** | Explain life cycle of Malarial parasite and drug acting on each stage of life cycle. Write brief note on quinolines as antimalarial agents. | **06** |
| | **(b)** | Write short notes on Anthelmintics. | **05** |
| | **(c)** | Explain Antiviral agents in detail. | **05** |
| **Q. 6** | **(a)** | Write detail notes on alkylating anticancer agents. | **06** |
| | **(b)** | Write short notes on Combinatorial chemistry. | **05** |
| | **(c)** | Write IUPAC name and Synthesis of following (Any two)<br>1. Cyclophosphamide<br>2. Tamoxifen<br>3. Fluorouracil | **05** |
| **Q.7** | **(a)** | Write detail notes on Molecular Modeling. | **06** |
| | **(b)** | What is lead molecules? Briefly explain lead optimization techniques. | **05** |
| | **(c)** | Explain in detail Hansch Linear Free Energy Relationship model in drug design. | **05** |

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