

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

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

## GUJARAT TECHNOLOGICAL UNIVERSITY

**B.PHARM – SEMESTER – VII • EXAMINATION – WINTER – 2015**

**Subject Code: 270003**

**Date: 09/12/2015**

**Subject Name: Pharmaceutical Chemistry - IX (Medicinal Chemistry)**

**Time: 10.30 AM to 1.30 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) Classify Quinolones with relevant examples. Discuss its mode of action. **06**  
(b) Discuss the synergism of sulfonamides and folate reductase inhibitors. **05**  
(c) Give the synthesis of ciprofloxacin. **05**
- Q.2** (a) Classify sulphonamides with relevant examples. Discuss the mode of action. **06**  
(b) Discuss the chemistry and SAR of sulphonamides. **05**  
(c) Give the scheme of synthesis of sulphamethoxazole and sulphaceamide. **05**
- Q.3** (a) Discuss the structural features & different classes of  $\beta$  lactam antibiotics with relevant examples. **06**  
(b) Discuss the SAR of Penicillins. **05**  
(c) Discuss the synergism of ampicillin with other drugs. **05**
- Q.4** (a) Discuss SAR of aminoglycosides antibiotics with relevant examples. **06**  
(b) Why tetracyclines are called so? Discuss their SAR. **05**  
(c) What are anthelmintics? Give the synthesis of albendazole. **05**
- Q.5** (a) Give the classification of anticancer drugs. Give mechanism of action of vinca alkaloids and give synthesis of Tamoxifen. **06**  
(b) Give the classification of anti TB drugs with relevant examples. **05**  
(c) Discuss the synthesis of clotrimazole and fluconazole. **05**
- Q.6** (a) Discuss the steroid ring nomenclature, stereochemistry and structure. **06**  
(b) What are progestins? Give their SAR. **05**  
(c) Write a short note on antiviral therapy with examples of drugs used in antiretroviral therapy. **05**
- Q.7** (a) Classify drugs used in type 2 diabetes and give synthesis of Tolbutamide. **06**  
(b) Write a short note on Immunomodulators. **05**  
(c) Give classification of antithyroid drugs. Write synthesis of Carbimazole and Thyroxine. **05**

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