

GUJARAT TECHNOLOGICAL UNIVERSITY
BPHARM – SEMESTER VII • EXAMINATION – WINTER • 2016

Subject code: 2270003**Date: 21-11-2016****Subject Name: Pharmaceutical Chemistry - IX (Medicinal Chemistry III)****Time: 10:30 am - 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 β -lactam antibiotics? Discuss carbapenams. **06**
(b) Discuss the following terms: Fanconi's Syndrome, Gray Baby Syndrome **05**
(c) Discuss the SAR of tetracyclines with appropriate examples. Discuss epimerization in this class of antibiotics. **05**
- Q.2** (a) What are aminoglycosides? Why are they called so? Discuss the SAR with relevant examples. **06**
(b) Give the scheme of synthesis of Chloramphenicol and discuss its SAR. **05**
(c) Give the basis of selective toxicity of sulphonamides by its MOA. Write a note on synergism of sulphonamides and discuss its SAR. **05**
- Q.3** (a) Describe the SAR of Quinolones with suitable examples. **06**
(b) Discuss the scheme of synthesis of- 1) Ofloxacin 2) Trimethoprim **05**
(c) Show which biochemical difference of fungi is exploited in anti fungal therapy and write a note on the Azoles with apt examples. **05**
- Q.4** (a) Write a note on drugs used in treatment of infections caused by Mycobacterium **06**
(b) Write a note on drugs used in treatment of helminthic infections and discuss synthesis of Albendazole **05**
(c) Write a note on Anti Viral drug therapy with examples of drugs used. **05**
- Q.5** (a) Classify anti malarial drugs with correct examples and write a note on combination therapy in malaria. **06**
(b) Write a note on the natural products used as antineoplastic agents. **05**
(c) Classify anti neoplastic alkylating agents with relevant examples. Discuss synthesis of 5-Fluorouracil. **05**
- Q. 6** (a) Write a note on solid phase technique in combinatorial experiments. **06**
(b) What is Lead optimization and discuss the role of isosteres. **05**
(c) What is QSAR? Discuss the role of hydrophobicity in it. **05**
- Q.7** (a) What is the Hanch analysis? Discuss **06**
(b) Write a note on Molecular modeling strategies and applications **05**
(c) Discuss the topliss decision tree and the Free Wilson approach to QSAR. **05**
