Seat No.: _____ Enrolment No._____

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 helmintic 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**

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