Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. - SEMESTER - V • EXAMINATION - WINTER 2013

Subject Code: 250002		et Code: 250002	Date: 29-11-2013	
	_	t Name: Pharmaceutical Microbiogy-I		
		10.30 am - 01.30 pm	Total Marks: 80	
	Instruct	tions: L. Attempt any five questions.		
	2	 Attempt any rive questions. Make suitable assumptions wherever necessar Figures to the right indicate full marks. 	y .	
Q.1	(a)	Describe the mechanism, conditions and process o		06
	(b)	method in detail including its advantages and disact Discuss in brief about chemical and biological indimethods.	_	05
	(c)	 Explain the mode of action for the following Steril Ethylene oxide Sterilization Radiation Sterilization method Dry heat method 	ization methods:	05
Q.2	(a) (b)	Explain in detail the Rideal Walker test for evaluat Explain the influence of following factors on the at 1. Concentration 2. Surface tension		06 05
	(c)	 Temperature Define the following terms: Disinfection Thermal death time Sterilization Tyndallization D value 		05
Q.3	(a)	Explain the following methods of Bacterial Count 1. Plate Count Method 2. Coulter Counter method	in detail:	06
	(b)	Differentiate between Viable and Total count, Dire Enumerate methods of total and viable count of ba		05
	(c)	What is the scope of microbiology in the field of P		05
Q.4	(a)	Classify microorganisms based on their nutritional requirements	, temperature and oxygen	06
	(b)	Describe the structures external to the cell wall of diagram along with their functions.	bacteria with a suitable	05
	(c)	Discuss in detail the structure, chemical composition. Draw the cycle of endospore formation.	on and importance of spores.	05

06

Q.5	(a)	Explain in brief methods of isolation of bacteria.	
	(b)	Discuss the following Staining methods in brief:	05
		1. Gram Staining	
		2. Acid fast Staining	
	(c)	Discuss in brief the construction and working of an electron microscope	05
Q. 6	(a)	Which products are required to be tested for sterility? Explain the principle of sterility testing. Which micro organisms are detected in sterility testing and which media is recommended in IP for sterility testing?	06
	(b)	Describe in brief the Direct inoculation method of sterility testing along with the interpretation of results at the end of the test	05
	(c)	Explain the Growth Promotion test with reference to Sterility testing as per IP.	05
Q. 7	(a)	Discuss in brief the one level assay method for microbial assay of antibiotics as per IP.	06
	(b)	Name the Microorganisms used for the assay of the following: 1. Streptomycin	05
		2. Bacitracin	
		3. Chloramphenicol	
		4. Calcium Pentothenate	
		5. Erythromycin	
	(c)	Explain the following with suitable examples:	05
	(0)	1. Selective media	32
		2. Differential media	
		2. Dillordinar modu	
