Seat No.: Enrolment No		Enrolment No.		
	GUJARAT TECHNOLOGICAL UNIVERS			
		M.E –II st SEMESTER–EXAMINATION – JULY- 2012		
Subject code: 1721601 Date: 06/			07/2012	
Subj	ect N	Name: Industrial Biotechnology		
Fime: 10:30 am – 13:00 pm Total Ma			rks: 70	
Instr	uctio	ons:		
1.	Atte	empt all questions.		
		Make suitable assumptions wherever necessary.		
3.	Figu	res to the right indicate full marks.		
Q.1	(a)	Discuss in detail about the isolation of industrially important microorganisms.	07	
	(b)	Explain the component parts of the fermentation process with a generalized schematic representation.	07	
Q.2	(a)	Discuss and Explain about the solid state fermentation processes.	07	
	(b)	Write brief about minerals and chelators as a media component. OR	07	
	(b)	Give brief about Carbohydrates, oils and fats as a carbon source in media for fermentation.	07	
Q.3	(a)	Discuss in detail about the preservation of the industrially important microorganisms.	07	
	(b)	What is sterilization? Derive the Del factor equation $\nabla = A \cdot t \cdot e^{-(E/RT)}$ for the first order steam sterilization.	07	
Ω 2	(a)	OR Discuss the different mechanism of filter sterilization.	07	
Q.3	(a)(b)	What is continuous culture? Differentiate Chemostat and Turbidostat.	07	
Q.4	(a)	What is steroid? Discuss about the steroid transformation.	07	
	(b)	Discuss the criteria for the transfer of inoculum and its effect on the productivity of the fermentation process. OR	07	
Q.4	(a)	Describe the development of Inocula for Bacterial processes.	07	
Q.4	(b)	What are metabolites? Describe about the antibiotics.	07	
Q.5	(a)	What are modern biotechnology and its products? Discuss about the biofertilizer.	07	
	(b)	Describe the fermentative production process for vitamin B_{12} along with its application.	07	
		OR		
Q.5	(a)	Discuss the major factors involved in the scale up of fermentation.	07	

(b) Describe Production of microbial enzyme, 'Amylase' with its application.

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