Seat No.: _		_	Enrolment No	
	(GUJ	ARAT TECHNOLOGICAL UNIVERSITY	
		M. E.	- SEMESTER - I • EXAMINATION - SUMMER • 2014	
Subject (code: 7	1170	3 Date: 19-06-2014	4
•			ronmental Microbiology	
Time: 02	_	ı - 05	5:00 pm Total Marks: 70	
Instructio 1		4 - 11 -		
	-		questions. le assumptions wherever necessary.	
			e right indicate full marks.	
	Q.1	(a)	Discuss the types of Bacteria on the basis of their mode of nutrition.	07
		(b)		07
	Q.2	(a)	Give the detail steps of media preparation. Explain various types of media.	07
		(b)	Elaborate in detail about Bright-field and Phase-contrast microscopy.	07
			OR	
		(b)	Explain the techniques for evaluating the effectiveness of antimicrobial chemical agents.	07
	Q.3	(a)	Give the detail of application of high temperature in the destruction of microorganisms.	07
		(b)	Describe economic importance of algae. OR	07
	Q.3	(a)	Elaborate positive interactions of microbes present in soil with suitable examples.	07
		(b)	What is Synchronous growth? Give the detailed idea about steady-state growth.	07
	Q.4	(a)	Give the characteristics of <i>Enterobacteriaceae</i> and <i>Azotobacteriaceae</i> .	07
		(b)	Explain in detail the biological treatment practiced in municipal wastewater-treatment plant. OR	07
	Q.4 Q.4	(a) (b)	Ribosomes are the site of protein synthesis Explain. Give in brief about TCA cycle. Explain energy production at the end aerobic respiration.	07 07

(a) Give an explanation how the activity of enzyme can be 07 regulated by a cell. (b) Write a note on growth curve of bacteria. **07**

Q.5 (a) Explain about the properties of enzymes.

Q.5

07

(b) Explain the life cycle of phage λ .

07
