Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION – WINTER 2013

	•	Code: 153701 Date: 27-11-2013	
Subject Name: Biodegradation and Bioremediation Time: 10.30 am - 01.00 pm Instructions: Total Marks: 70			
1115	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	What is the bioremediation and explain the types of bioremediation? What is biodegradation and explain the factors affecting biodegradation	07 07
Q.2	(a) (b)	Explain Natural attenuation in bioremediation. Explain the treatment of distillery wastes with flow sheet diagram. OR	07 07
	(b)	Explain the process of removal of heavy metals from waste water.	07
Q.3	(a) (b)	Write a detailed account on microbial biodegradation of xanobiotics What is the process of treatment and characteristics of the wastes water OR	07 07
Q.3	(a) (b)	Why the coliform organisms are used in the bacterial analysis of water. Explain the biological control of air pollution	07 07
Q.4	(a) (b)	What is the different between solid phase and slurry phase bioremediation What is the process involve in the sludge treatment explain in detail	07 07
		OR	
Q.4	(a)	Explain the Bioventing process in Bioremedation.	07
	(b)	What is the concept and scope of Environmental biotechnology	07
Q.5	(a) (b)	Explain the activated sludge process with full indicated diagram Explain the anaerobic digester in detail OR	07 07
Q.5	(a)	Explain the degradation of sulpher compounds present in coal and petroleum	07
	(b)	Define the following terms:- 1. Acclimation 2. Recalcitrance 3. Cometabolism 4. Bioaugmentation	07
		5. Biostimulation 6. Bioscrubber 7. Land farming	
