Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 153701 **Date: 26-11-2014**

Subject Name: Biodegradation and Bioremediation

Time: 10.30 am - 01.00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain natural attenuation in bioremediation.	**07**
	(b)	Write a note on bioremediation and discuss its constraints and priorities.	**07**
Q.2	**(a)**	Explain the method of treatment cotton textile mill wastes with the help of flow sheets.	**07**
	(b)	Explain the pathway of genetic engineering of biodegradation.	**07**
		OR	
	(b)	Explain the trickling filter towers.	**07**
Q.3	**(a)**	Explain the bacterial examination of water for portability	**07**
	(b)	Explain details about bioaugmentation and biostimulation.	**07**
		OR	
Q.3	**(a)**	Explain the oxidation pond in detail.	**07**
	(b)	Explain the process of removal of heavy metals from wastes water.	**07**
Q.4	**(a)**	What is the effect of chemical structure on biodegradation	**07**
	(b)	Define in detail the cometabolism and biotransformation.	**07**
		OR	
Q.4	**(a)**	Explain the Biosparging process in Bioremediation	**07**
	(b)	Explain in detail about Phytoremediation.	**07**
Q.5	**(a)**	Explain the biological control of air pollution.	**07**
	(b)	Explain the biological treatment of waste water.	**07**
		OR	
Q.5	**(a)**	What are the advantages and disadvantages of Bioremediation?	**07**
	(b)	Explain detoxification activation in biodegradation.	**07**

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