Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

ME Semester –I Examination Feb. - 2012

Subject code: 711802N **Date: 13/02/2012**
Subject Name: Industrial Wastewater Management
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)**	Compare domestic wastewater and industrial wastewater .Cite appropriate example wherever necessary.	**07**
	(b)	Express your views about "Cost of pollution control is unbearable".	**07**
Q.2	**(a)**	What are the basic objectives of setting up a CETP? Describe limitations of CETPs.	**07**
	(b)	Enlist and explain the factors to be considered while selecting river as the ultimate point of discharge.	**07**
		OR	
	(b)	Given an option which environmental sink will you prefer for discharge of treated effluent from starch industry? Justify your selection.	**07**
Q.3	**(a)**	Enlist different environmental sinks for discharge of liquid effluents and explain why the discharge standards are different for different sinks.	**07**
	(b)	Suggest the measures to reduce the strength of the wastewater.	**07**
		OR	
Q.3	**(a)**	How will you convince an industrialist to adopt the pollution control measures? Discuss in detail.	**07**
	(b)	Explain what needs to be done for reducing the volume of industrial wastewater.	**07**
Q.4	**(a)**	List steps involved in the basic design of a CETP. Describe one of these in detail	**07**

	(b)	You get an assignment on a 'water reuse system' project. Discuss briefly the technical issues in planning such systems that you shall include in your report.	**07**

OR

Q.4	**(a)**	How does adoption of cleaner production help an industry?	**07**
	(b)	Discuss the methodology to be adopted for pollution prevention in an industry.	**07**
Q.5	**(a)**	Explain the concept of 'new resource' of potable water in the context of water reuse.	**07**
	(b)	Discuss major barriers to extensive municipal or industrial water reuse.	**07**

OR

Q.5	**(a)**	Explain the importance of 'characterization of sources' for water reuse. Carry out a detailed listing the factors involved in characterization.	**07**
	(b)	Highlight the role of pressure-driven membrane separation technologies in enhancing water reuse. Describe any one such technology	**07**

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