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GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII(NEW) • EXAMINATION – WINTER 2016

	•	Code:2171304 Date:23/11/2016 Name:Cleaner Production & Waste Utilization(Departmental Elect			
- II) Tin) ne:10	0.30 AM to 1.00 PM Total Marks: 70			
	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.			
Q.1	(a) (b)	Explain barrier to implement cleaner production in industries. How cleaner production is beneficial for industrial economy?	07 07		
Q.2	(a)	According to you which step in cleaner production methodology is most important for implementing CP in any industry. Justify your answer.	07		
	(b)	Explain step by step methodology to implement cleaner production practice in textile industry.	07		
		OR			
	(b)	Define good housekeeping practice. Enlist the measures to apply good housekeeping in textile industry.	07		
Q.3	(a) (b)	Differentiate between walk through energy audit and detail energy audit. Discuss the hierarchy of cleaner production. OR			
Q.3	(a) (b)	Differentiate between recycling & reuse with their application. Write a short note on "LMTD".			
Q.4	(a)	Define waste heat recovery. Differentiate between direct & indirect heat recovery with example.	07		
	(b)	Explain how good housekeeping is useful in environmental management system.	07		
		OR			
Q.4	(a)	Explain the importance of energy audit.	07		
	(b)	Discuss the concept of 3R's.	07		
Q.5	(a)	Enlist the various types of heat recovery instrument available for heat recovery. Explain plate & frame heat exchanger with neat sketch.	07		
	(b)	Identify the solid and liquid waste generation point in dairy industry & find out the possible opportunity for their recycle & reuse.	07		
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Q.5	(a) (b)	Write a short note on heat wheel. Identify the solid and liquid waste generation point in sugar industry & find out the possible opportunity for their recycle & reuse.	07 07		