Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – IV • EXAMINATION – SUMMER • 2014

Subject code: 743001 **Date: 04-06-2014**

Subject Name: Cleaner Production

Time: 02:30 pm - 05:00 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		What is the difference between End of Pipe Treatment and Cleaner Production? Compare these techniques with its advantages and disadvantages.	**14**
Q.2	**(a)**	Discuss the difference between cleaner production and cleaner technology.	**4**
	(b)	Discuss Good house keeping in detail.	**10**
		OR	
	(b)	Discuss cleaner production in paper manufacturing industry from waster paper as raw material .	**10**
Q.3	**(a)**	Explain- Energy Audit ï as a part of cleaner production.	**7**
	(b)	Explain in detail the cleaner production techniques.	**7**
		OR	
	(a)	Explain financial analysis of cleaner production.	**7**
	(b)	Write in brief about major challenges for implementing Cleaner Production in a Chemical Industry.	**7**
Q.4	**(a)**	Discuss in detail the six step methodology in cleaner production.	**14**
		OR	
	(a)	Discuss cleaner production with its benefits.	**7**
	(b)	Discuss the implementation of Cleaner Production in a plant manufacturing Vinyl sulphone.	**7**
Q.5	**(a)**	Role of C.P. in survival and sustainable development of Chemical Industries.	**7**
	(b)	Explain in detail methodology of energy audit.	**7**
		OR	
	(a)	Give an example of cleaner production in any one chemical process industry.	**7**
	(b)	Write the steps to be considered for savings energy in steam system in a Chemical process industry.	**7**

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