Seat No.:	Enrolment No.

Subject Code: 2721610

GUJARAT TECHNOLOGICAL UNIVERSITY

ME SEMESTER II EXAMINATION – SUMMER 2017

Date:31/05/2017

Subject Name: Cleaner Production In Chemical Industries (CPCI) Time:02:30 PM to 05:00 PM Total Marks: 70			
 Instructions: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 			
Q.1	(a)	Explain various tools and techniques of cleaner production used in Chemical Industries.	07
	(b)	Explain concept of Chemical Engineering unit operation 'Extraction' and its use in Cleaner Production.	07
Q.2	(a)	Discuss in detail about role of Cleaner Production in survival and sustainable development of Chemical Industries with suitable case study.	07
	(b)	Explain in detail barriers and motivations in cleaner production. OR	07
	(b)	Write a note on importance of good housekeeping in CP with suitable example.	07
Q.3	(a) (b)	Write a detailed note on energy audit. What is climate change? Mention various remedial measures to combat climate change.	07 07
Q.3	(a)	OR Explain the concept of Energy Conservation and Energy Integration with	07
Q.J	(b)	suitable example. Write a note on clean flues.	07
Q.4	(a) (b)	Explain concept and principal of green chemistry. Describe use of thermodynamics and reaction engineering principles for cleaner production.	07 07
		OR	
Q.4	(a) (b)	Write a note on cleaner production practices in sugar industry. Write a note on cleaner production practices in Dyes and Intermediate Industry.	07 07
Q.5	(a) (b)	Explain the concept of waste minimization with example of H-Acid plant. Describe the benefits of cleaner production as compare end of pipe treatment approach.	07 07
Q.5	(a) (b)	OR Describe advantages and disadvantages of reuse and recycle in detail. Explain the concept of 3 R in detail.	07 07
