Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

		ME – SEMESTER IV (NEW) – • EXAMINATION – SUMMER 2016	
Sub	Subject Code: 2740304 Date:04/05		016
	•	Name: Process Control and Optimization	
	•	:30 am to 01:00 pm Total Marks:	: 70
	ruction		
	1.	Attempt all questions.	
	2. 3.	Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Discuss about unit supervision model in detail.	07
	(b)	Give explanation on importance of safety interlocks for boiler control.	07
Q.2	(a)	Discuss about Cascade Control strategy for temperature control in chemical reactor	07
	(b)	Discuss about Liquid ó Liquid Heat Exchangers Controls OR	07
	(b)	Discuss about Feed Controllers of Distillation Column	07
Q.3	(a)	Discuss about boiler pressure and firing rate control in detail.	07
	(b)	Discuss about Temperature Control Schemes of Reactor OR	07
Q.3	(a)	Give explanation on Importance of dual mode controller for rector performance.	07
	(b)	Discuss about Internal Model Control (IMC) with ANN configuration for Distillation	07
Q.4		Discuss about Unit operations controller with example of reactor in detail.	14
Q.4		OR Discuss the kinetics of modelling of perfectly mixed reactor with cooling jacket in detail.	14
Q.5		Discuss about Advance Controls of Heat Exchanger in detail.	14
Q.5		OR Give schematic of batch reactor sequencing logic and explain it in detail.	14
