Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

M. E. - SEMESTER – I • EXAMINATION – SUMMER • 2013

_		de: 710303N Date: 13-06-2013	ì
Time	e: 10.3	<b>30 am – 01.00 pm</b> Total Marks: 70	)
Instr	2. N	OIIS: Attempt all questions. Take suitable assumptions wherever necessary. Sigures to the right indicate full marks.	
Q.1	(a) (b)	Give the complete procedure of Process Identification. What do you mean by model of a system? Explain static models in details.	06 08
Q.2	(a)	Give the design procedure of single loop PID controller using relay feedback method.	08
	(b)	Write short note on four parameter model.	06
		OR	
	<b>(b)</b>	Write short note on models of integrating system.	06
Q.3	(a) (b)	Write short note on disturbance models.  What do you mean by tuning rule for PID controller?.Explain Zeigler Nichols frequency response method in details.  OR	06
Q.3	(a)	Write short note on ON OFF control and explain Integral control action in details.	08
	(b)		06
Q.4	(a) (b)	Explain the interacting and non interacting form of PID Control.  What are the differences between feedforward and feedback control loops. Explain feedforward control scheme for heat exchanger system.  OR	06
Q.4	(a) (b)	Write short note on set point weighing.  Draw and explain block diagram of PID controller with velocity algorithm.	07 07
Q.5	(a) (b)	Write short note on a controller with a tracking mode. Write short note on Digital PID Controller  OR	07 07
Q.5	(a) (b)	Explain sensitivity to measurement noise and process characteristics.  Explain concept of analytical tuning using (lamda) tuning method.	07 07

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