GUJARAT TECHNOLOGICAL UNIVERSITY Diploma Engineering - SEMESTER-VI • EXAMINATION – SUMMER 2013

Subject Code: 361705Date: 20/05/2013Subject Name: Advance Process ControlTime: 10:30 am TO 01:00 pmTime: 10:30 am TO 01:00 pmTotal Marks: 70Instructions:Total Marks: 70			
	1. Att 2. Ma 3. Fig 4. Eng	empt all questions. ke suitable assumptions wherever necessary. ures to the right indicate full marks. glish version is considered to be Authentic.	
Q.1	(a)	List out the advantages of PLC over other conventional automation system	07
0.0	(b)	Draw architecture of PLC and explain working of it in detail.	07
Q.2	(a)	Draw symbols of NO Relay, Motor, Solenoid, Red lamp, NC Pressure switch NO Temp switch NC Level switch	07
	(b)	Describe Continuous Process Control with the help of neat sketch.	07
		OR	
	(b)	Describe Discrete-state Process Control with the help of neat sketch.	07
Q.3			
	(a) (b)	List out different modules used for PLC. And explain any one in detail. List out different types programming languages used to program PLC. Also develop ladder diagram to make AND logic for PLC.	07 07
Q.3	(a)	Why isolation is require? List out different isolation techniques. And explain any one in detail.	07
	(b)	Discuss the selection criteria to select PLC.	07
Q.4			
	(a) (b)	What are the Achievements and Future of Artificial Intelligence? Justify the need of automation in industry.	07 07
Q. 4	(a)	Draw System Architecture of DCS. And explain each level in detail	07
	(b)	Write a short note on logger.	07
Q.5			
C	(a)	Draw functional block diagram of Supervisory Control & Data Acquisition System (SCADA) and explain each block in detail.	07
	(b)	Write a short note on CRT display for DCS.	07
Q.5	(a)	Draw functional block diagram of Direct Digital Control explain each block in detail.	07
	(b)	Write a short note on Network topology for DCS.	07
