Date:08/05/2015

Subject Code:171702

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION - SUMMER • 2015

Subject Name: Programmable Automation Controller Time: 02.30pm-05.00pm Instructions: Total Mark		ks: 70	
His	1 2	. Attempt all questions.	
Q.1	(a) (b)	What are basic requirements of PLC input modules? Draw its internal diagrams. What are basic requirements of PLC output modules? Draw its internal diagrams.	07 07
Q.2	(a) (b)	List and discuss advantages & disadvantages of a PLC. What are basic requirements of PLC power supplies modules? Draw its internal diagrams.	07 07
	(b)	OR List any three input analog devices used for PLC. Draw and explain any one of it.	07
	(6)	Dist any times input analog devices used for 120. Draw and explain any one of the	07
Q.3	(a)	List any three output analog devices used for PLC. Draw and explain any one of	07
	(b)	it. What is fail-safe circuit? Draw and discuss working of any fail-safe circuit.	07
O 2	(-)	OR Establish relation of Digital Cata Lagia to Contact/Cail Lagia with avanuals	07
Q.3	(a) (b)	Establish relation of Digital Gate Logic to Contact/Coil Logic with examples. Discuss application of PLC basic input registers and output registers functions.	07 07
Q.4	(a)	Explain PLC timer functions in detail.	07
	(b)	List out PLC Arithmetic Functions and show their use in any of the application.	07
		OR	
Q.4	(a)	List out PLC Number Comparison Functions and show their use in any of the application.	07
	(b)	Discuss PLC Jump Functions with example.	07
Q.5	(a)	Prepare basic two axis ROBOT with PLC sequencer control. Draw schematic and	07
	(b)	prepare ladder diagram for it. Discuss MONITOR mode function and FORCE mode function of PLC.	07
		OR	
Q.5	(a) (b)	Discuss PLC SKIP function with its application. List out factors to be considered in selecting the PLC.	07 07
	(0)	List out factors to be considered in selecting the I LC.	U /
