Seat N	o.:	Enrolment No			
<b>GUJARAT TECHNOL</b>			OGICAL UNIVERSITY		
	DIP	LOMA ENGG VI <sup>th</sup> SEMESTER-	-EXAMINATION – MAY/JUNE- 2012		
Subje	ect co	ode: 361705	Date: 31/05/20	012	
Subje	ect N	ame: Advanced process contr	ol		
Time	: 10:	:30 am – 01:00 pm	Total Marks:	: 70	
Instr	ucti	ons:			
	<b>1.</b> <i>A</i>	Attempt all questions.			
	2. I	Make suitable assumptions whereve	er necessary.		
	3. 1	<ul> <li>Figures to the right indicate full marks.</li> <li>English version is considered to be Authentic</li> </ul>			
	4. 1	English version is considered to be	Authentic		
Q.1	(a)	Draw symbols for the following.		07	
		(i) NO level switch	(v) Solenoid		
		(ii) NO temperature switch	(vi)NO pressure switch		
		(iii) Motor	(vii) NO flow switch		
	(b)	(1V)Light Draw block diagram of PLC and explain its working in detail		07	
02	(U)	Draw block diagram of FLC and ex	plain its working in detail.	07	
Q.1	(a)	Mention various programming languages used for PLC programming. And		07	
draw a ladder diagram to implement Exclusi		draw a ladder diagram to implement	t Exclusive OR logic.		
(b) Discuss the selection criteria for the sele			selection of PLC.	07	
	(h)	Discuss the advantages of DCC in a	OR	07	
03	(U)	Discuss the advantages of DCS in operation and safety.		07	
(a) Explain discrete state process control with su			ol with suitable example.	07	
	(b)	What is latching? Explain its importance in ladder diagram with suitable <b>0</b>			
		example.			
• •	(-)		OR	07	
(a) Explain discrete continuous process control (b) What is isolation? How can you implement		Explain discrete continuous process What is isolation? How can you imp	control with suitable example.	07	
	(0)	what is isolation? How can you mij		07	
Q.4					
	(a)	How PLC is superior as compared t	o conventional automation.	07	
	(b)	Explain the functions performed at	various levels of DCS with suitable	07	
		example.	OP		
Q 4	(a)	List out various input/output modul	<b>On</b> es for PI C and explain any two of them	07	
<b>Q</b> . 1	(b)	Explain trend display and mimic ge	nerator in detail.	07	
	( )				
Q.5	<i>,</i> .				
	(a)	Discuss the features of intelligent co	ontrol.	07	
	(D)	List out various network topology for	or DCS and explain any one of them.	07	
Q.5	(a)	Explain direct digital control with n	ecessary diagram.	07	
	(b)	With the help of necessary block diagram, explain SCADA (supervisory <b>0</b> '			
	. ,	control and data acquisition)			
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