Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII • EXAMINATION – SUMMER • 2015

Subject Code:182403		Code:182403 Date: 05/05/201	Date: 05/05/2015	
Su	bject	Name:Industrial Automation.(D.EII).		
Ti	me:10	0.30AM-01.00PM Total Marks: '	70	
Ins	truction			
	2. 3.	ı v		
Q.1	(a) (b)	Explain about ladder & Boolean mnemonics programming language. Explain about functional blocks & English statement programming language.	07 07	
Q.2	(a)	Draw P.L.C. system layout & explain the functionality of all inter-connected parts.	07	
	(b)	Explain about current trends in computer controlled of process plants. Also,explain about power ladder diagram. OR	07	
	(b)	Explain D.C.S.integration with P.L.C"S & computers.	07	
Q.3	(a)	Draw the schematics of basic D.C.S. & explain different modules of D.C.S.in brief.	07	
	(b)	List the D.C.S.supervisory computer tasks & explain each in brief. OR	07	
Q.3	(a)	Explain the P.L.C. MOVE functions & illustrate the single register move using an addition process.	07	
	(b)	Explain the JUMP WITH RETURN & JUMP WITH NON RETURN instructions.	07	
Q.4	(a) (b)	Explain the P.L.C. arithmetic functions & draw block format of each. Explain in detail the P.L.C. counter functions. OR	07 07	
Q.4	(a)	Explain SHIFT RIGHT, REGISTER ROTATE & MULTIPLE SHIFT RIGHT Functions of P.L.C.	07	
	(b)	Draw the timing diagram of retentive timer. Draw the timing diagram & write P.L.C.ladder logic equivalent of ON DELAY & DUAL OFF DELAY timer	07	
Q.5	(a)	Explain the process scanning in P.L.C. with the help of scan cycle & appropriate example.	07	
	(b)	Explain the P.L.C. SEQUENCER function. Write the ladder for sequencer with timer pulsing.	07	
0.5	(5)	OR	07	
Q.5	(a)	Explain the network access protocols of D.C.S.& list advantages & drawbacks of various types of network access protocols.	07	
	(b)	Explain P.L.C. table & Register moves in detail with necessary diagrams.	07	
