Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII (OLD) - EXAMINATION – SUMMER 2017

Subject Code:182403 **Date:04/05/2017**

Subject Name: Industrial Automation (Department Elective II)

Time:10:30 AM to 01:00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Define PLC. Draw the layouts of PLC input and output modules and explain eachin details.	**07**
	(b)	Explain about functional blocks & English statement programming language.	**07**
Q.2	**(a)**	Explain about industrial process timing application of plc.	**07**
	(b)	Explain about PLC counter functions.	**07**
		OR	
	(b)	Explain PLC timer functions.	**07**
Q.3	**(a)**	Explain about DCS as an automation tool to support enterprise resources planning.	**07**
	(b)	Explain the Network Access Protocols of DCS and list advantages and drawbacks of various types of Network Access Protocols.	**07**
		OR	
Q.3	**(a)**	Explain DCS integration with PLCs and Computers.	**07**
	(b)	Explain various output analog and ON / OFF devices which can be used 07 with PLC.	**07**
Q.4	**(a)**	Explain jump with return and jump with non return instructions.	**07**
	(b)	Explain the P.L.C. SEQUENCER function. Write the ladder for sequencer with timer pulsing.	**07**
		OR	
Q.4	**(a)**	Explain about PLC arithmetic functions.	**07**
	(b)	Explain PLC matrix functions.	**07**
Q.5	**(a)**	Explain about plc skip & master control relay functions & its application.	**07**
	(b)	Explain about current trends in computer controlled of process plants Also, explain about power ladder diagram.	**07**
		OR	
Q.5	**(a)**	Explain about application development & industrial application for automobile.	**07**
	(b)	Explain the PLC arithmetic functions and draw block format of each.	**07**

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