CMR
INSTITUTE OF
TECHNOLOGY

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Internal Assesment Test - III

Sub:	PROGRAMMABLE LOGIC CONTROLLERS							Code:	10EE752
Date:	20/11/2017	Duration:	90 mins	Max Marks:	50	Sem:	5	Branch:	EEE

Answer Any FIVE FULL Questions

		Marks	OBE	
			CO	RBT
1 (a)	Illustrate data handling in PLCs with suitable diagrams.	[10]	CO4	L3
2 (a)	Explain different methods by which the controller can react to an error signal in PLC closed loop control schemes with neat block diagram.	[10]	CO4	L4
3 (a)	Explain with a ladder diagram and instruction list, the operation of a 4 bit shift register program in Mitsubishi PLC.	[10]	CO4	L4
4 (a)	Program a PLC to control the operation of bottle packing in an industry with a ladder diagram representation.	[10]	CO4	L6
5 (a)	Explain the location of stop and emergency stop switches in a safe PLC system.	[10]	C04	L4
6 (a)	Explain the latch circuit with an example. Write the ladder diagram for the application of latching circuit by considering the motor is controlled by stop and start push button switches and for which one signal light must be illuminated when the power is applied to the motor and another when it is not applied.	[10]	CO4	L4
7 (a)	For the following Boolean equation $Y = A + B(A + C\overline{B} + D\overline{A}C) + ABCD$ (i) Draw the ladder diagram for the unsimplified equation. (ii) Simplify the equation. (iii) Draw the ladder diagram for the simplified equation.	[10]	CO4	L1