Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER– III • EXAMINATION – SUMMER 2015

Subject Code: 730406 **Date: 02/05/2015**

Subject Name: Peripheral System Design & Interfacing

Time: 2:30 pm to 5:00 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)**	What are limitations of Traditional Controller? Draw and explain Block diagram of PLC. Also list its advantages and area of applications.	**07**
	(b)	Explain different program development tools used in microprocessor based system.	**07**
Q.2	**(a)**	What is Centronics? Explain Centronics handshaking with timing diagram.	**07**
	(b)	Explain procedure for the parallel port to be used as 8-bits input.	**07**
		OR	
	(b)	List different serial portós registers of PCs. Explain any three of them in detail.	**07**
Q.3	**(a)**	Explain Different Mode of IEEE 1284.	**07**
	(b)	Give answer of the following question. 1). Explain RS-449 communication interface in detail. 2). Explain Null Modem.	**07**
		OR	
Q.3	**(a)**	Discuss GPIB signals and explain GPIB standard with the flow of data transfer handshake waveforms.	**07**
	(b)	Explain RS232 C standard with its voltage level and connectors. Also Mention its features and limitations.	**07**
Q.4	**(a)**	Draw the pin diagram of the 8257 DMA controller and explain the function of the DREQ, DACK, HLDA, HRQ. ADSTB.	**07**
	(b)	Draw and explain the block diagram of 8279 key board/display interfacing Controller.	**07**
		OR	
Q.4	**(a)**	Explain in brief ISA, EISA, PCI and VESA-VL bus.	**07**
Q.4	**(b)**	Explain in brief 1. Cross compilers 2. Automated Test Equipment.	**07**
Q.5	**(a)**	Explain general functions of CRT controller. Also explain transparent addressing in CRT controller in brief.	**07**
	(b)	What is frame synchronism using RES? Explain it in detail With timing diagram.	**07**
		OR	
Q.5	**(a)**	Draw and explain Block diagram of PC based data acquisition system.	**07**
	(b)	Write a short not on PID Controller.	**07**

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