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GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER-IV • EXAMINATION – SUMMER 2013

Subject Code: X40901 Date: 04-06-2013 **Subject Name: Microprocessor & Interfacing** Time: 10.30 am - 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. (a) It is required to interface 2 K byte of memory with microprocessor 8085. Draw 07 **Q.1** interfacing circuit and find its memory address range. (b) Explain the sequence of operation performed by microprocessor 8085 when the 07 instruction LXI H, 2060 H, stored from memory location 2000H is executed. **Q.2** (a) Discuss various addressing modes used in the microprocessor 8085 with suitable 07 example. **(b)** Draw pin diagram of microprocessor 8085. Discuss various pins and their functions. 07 (b) Draw the block diagram of microprocessor 8085. Discuss control signals and their 07 significance. **Q.3** (a) Explain the interrupt handling process of microprocessor 8085. Discuss RST 07 instructions. 07 **(b)** Write an 8085 ALP to convert given BCD number in to binary form. (a) Discuss 8085 vectored interrupts. Explain SIM and RIM instructions. **Q.3** 07 (b) What is stack? Write a program to exchange contents of PSW with register pair H-07 L. **Q.4** (a) Explain control word format of 8255 A. Write a program to set port A in mode 0 and port C in BSR mode. Draw block diagram and explain control word format of 8253. **07 (b)** OR (a) Draw block diagram and discuss priority modes of 8259 A. **Q.4** 07 Discuss 8255 A, mode-1 in input and output configurations. **(b)** 07 **Q.5** Discuss block diagram of 8237/8257 DMA Controller. 07 (a) **(b)** Discuss in brief USART. 07 OR (a) Explain 8279 with appropriate block diagram. **Q.5 07 (b)** Explain requirement of programmable interface device. 07
