Enrolment No.\_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY** PDDC- SEMESTER-IV - EXAMINATION - SUMMER 2017 Subject Code: X40901 Date:25/05/2017 Subject Name: Microprocessor & Interfacing 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. 0.1 (a) Draw and explain pin diagram of 8085 microprocessor 07 (b) List the primary four operations that are performed by microprocessor. Also 07 explain address bus, data bus and control bus using bus structure diagram. Explain different types of flag registers in 8085 microprocessor with its Q.2 07 (a) applications in programming. Explain any seven Arithmetic instructions of 8085 microprocessor. **(b)** 07 OR (b) Explain any seven data transfer instructions of 8085 microprocessor. 07 Q.3 Discuss architecture of 8085 microprocessor. 07 **(a)** Write a program to load the number 8BH in register D and load the number 07 **(b)** 6FH in register C. Increment the contents of C by one. Add the contents of register C and D and display the sum at the output PORT 1. OR **Q.3** Discuss the different types of interrupts available with 8085 microprocessor. 07 (a) **(b)** Write a program to load hexadecimal number 9BH and A7H in register D and E 07 respectively, and add the numbers. If sum is greater than FFH, display 01H at output PORT 0; otherwise display the sum. (a) Discuss successive approximation type ADC in brief. 07 **0.4 (b)** Briefly explain following: 07 1. Stack 2. Subroutine 3. Program counter OR **Q.4 (a)** Discuss binary ladder R-2R type Digital to Analog 8-bit conversion process 07 with necessary diagrams. Discuss 16 bit data operation of 8085 microprocessor. **(b)** 07 Q.5 Explain 8237 DMA controller. 07 **(a)** Discuss 8255A programmable peripheral interface with the help of block **(b)** 07 diagram. OR Q.5 Draw and explain the block diagram of keyboard display controller 8279. 07 **(a)** Discuss programmable interrupt controller 8259A with the help of block **(b)** 07 diagram.

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