Sardar Vallabhbhai National Institute of Technology, Surat

Microprocessor and Interfacing Techniques

End Semester Exam December 2017

Exam Date : 28/11/2017 **Exam Time :** 2:00 PM to 5:00 PM **Total Marks :** 50

Instructions :

1. Write your roll no. and other necessary details clearly on Answer book and Question Paper.
2. Assume necessary data but give proper justification.
3. Be precise and clear in answering all questions.
4. Figure to the right indicate full marks of that question.
5. Please start answer to new question on new page.

Q-1 Answer the Following [20]

1) What is subroutine?
2) Steps involved fetching a byte in 8085.
3) How many interrupts does 8085 have, mention them
4) Explain the different instruction formats with examples
5) Explain the difference between a JMP instruction and CALL instruction
6) Explain the signals HOLD, READY and SID
7) What are the flags available in 8085 explain?
8) Explain LDA, STA and DAA instructions
9) How many machine cycles does 8085 have, mention them
10) How many operations are there in the instruction set of 8085?

Q-2 Answer the Following [30]

1) Explain the architecture of microprocessors 8085.
2) Draw and explain the timing diagram of opcode fetch cycle.
3) Write a 8085 ALP to generate a accurate time delay of 100ms.
4) Explain the direct addressing modes and indirect addressing modes of 8085 with example.
5) Assume that the accumulator contents data bytes 88 hand instruction MOV C, A 4FH is fetched. List the steps decoding and executing the instruction.
6) With suitable examples explain 8085 instruction set in detail.
7) Write an 8085 ALP to perform 32 bit binary addition?
8) Write a Program to Perform the following functions and verify the output steps: a. Load the number 5CH in register D b. Load the number 9E H in register C . Increment the Contents of register C by one. d. Add the contents of register C and D and Display the sum at output port1.
9) Write an 8085 ALP to convert the hexadecimal value to decimal value? (8)
10) Draw and explain the timing diagram of memory read cycle.

ALL THE BEST!

Paper By: Vatsal Mehta-Jasmin Nasit