

MANIPAL UNIVERSITY JAIPUR
SCHOOL OF COMPUTING AND IT
IV Semester B.Tech - Second Sessional Examination (2017-18)
Branch: CSE / IT /CCE
CS1403- Microprocessor and Microcontroller (MPMC)
(CLOSED BOOK)

Duration: 1 hour

Max. Marks: 15

Instructions:

- All questions are compulsory.
- Missing data if any may be assumed suitably.

1. Write a program to convert the lower case 10 byte character string stored at 52333h to upper case. [3]
Note: the upper case string must be stored at 52333h
2. Write a procedure (PROC) to calculate Addition of 2 numbers and MACRO to subtract 2 numbers. Also explain on the need of Macro. [3]
3. A programmer wants to create his own interrupt 34h, to convert the result obtained after performing addition into even number. [3]
Note: assume the physical address of ISR 34h and explain the complete process of interrupt execution (including calculation of ISR's addresses)
4. Using assembler directives, perform the following tasks: [2]
 - a. create a stack of 100 words (Use SEGMENT and ENDS directive)
 - b. create a name STACK_TOP for the top of above stack and initialise with Top of the stack (Last element).
5. Configure the 8259A master IC with 8086 processor (along with its four slaves contacted at IR1, IR2, IR4 and IR 7) for the interrupt type 15h in auto EOI, edge triggered, fully nester, ^{non}~~none~~ buffered mode. Also mask the remaining pins of master IC (other than the IR pins having slaves) [4]
Note: write only command words (with explanation)