2053

B.E. (Information Technology)

Fourth Semester

PCIT-401: Microprocessor and Assembly Language Programming

Time allowed: 3 Hours

Max. Marks: 50

NOTE: *Attempt* <u>*five*</u> *questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I.   Attempt the following:-

   a) Write down names of registers available for arithmetic and logical instructions in 8085 microprocessor.

   b) What are the various flags available in 8085 microprocessor?

   c) Memory address of Last location of memory is FFFF H and size of memory is 4KB. Find the address of first location of the memory?

   d) Write program using loop for a down counter upto value 00. Use single register B with value FFH.

   e) What are the various call instructions available in 8085 microprocessor?   (5x2)

UNIT - I

II.   Draw block diagram and explain architecture of 8085 microprocessor.   (10)

III.   a) Interface 8085 microprocessor with 2 KB ROM and 1KB RAM. Also mention their address ranges.

   b) Write a program to sort 4 numbers in ascending order.   (2x5)

IV.   Explain following instructions, each with an example:-

   (a) ADDM

   (b) MOV a, M

   (c) LXI Rp, FF00 H

   (d) ANI 8bit value   (10)

P.T.O.

UNIT - II

V.   Draw diagram to interface 1 device to 8085 microprocessor using RST7 interrupt. Write ISR to turn on a buzzer connected at address FFH, whenever interrupt occurs.   (10)

VI.   a) Write all instructions to move data on stack and retrieve data from the stack.

      b) Write a program to generate square wave at address 00H with 500 ms ON time. Where clock frequency is 1 MHz.   (2x5)

VII. Write note on following chips:-
      a) 8259
      b) 8251   (10)

x-x-x