C 15233 (Pages : 2) Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION DECEMBER 2010

AI/BM 04 403—INTRODUCTION TO MICROPROCESSORS

(2004 admissions)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

I. (a) Name the flag bits of 8085 and explain the use of each one.

(b) Which lead to different addressing modes ?

(c) Explain with an example, how the BCD code can be converted into the equivalent binary.

(d) What operation is performed by the following instructions ?

(i) XCHG. (ii) SPHL.

(e) Explain the concept of pipeline.

(f) List the advantages of segmented memory operation.

(g) Explain the de-coded mode of operation of the scan section of the 8279 keyboard display controller IC.

(h) Discuss about DMA mode of data transfer.

(8 × 5 = 40 marks)

II. (a) List the control bus signals of 8085 and explain the use of each one.

Or

(b) (i) Name the interrupt pins of 8085 in ascending order of priority and specify their vector address also.

(8 marks)

(ii) List the advantages and disadvantages of memory mapped I/O. (7 marks)

III. (a) Write an assembly language program using 8085 instructions to add an array of BCD numbers available in memory location starting from 1200 h and ending at 120 Ah. The BCD numbers are stored in memory in packed BCD form. Store the result at 2000 h. Neglect the carry. Also draw the flowchart.

Or

(b) List all the logic and arithmetic instructions of 8085 and explain.

(15 marks)

IV. (a) Draw the internal architecture of 8086 (Programming model) in block diagram form and explain.

Or

(b) Discuss about the maximum mode operation of 8086 in detail.

(15 marks)

Turn over

V. (a) Draw the internal architecture of 8255 in block diagram form and explain about mode-0, mode-1 and mode-2 operation briefly.

Or

(b) With the help of diagram, explain how a ADC chip can be interfaced to 8086 microprocessor. (15 marks)

[4 × 15 = 60 marks]