C 6081

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Name.....

Reg. No.....

FOURTH SEMESTER B. TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2010

AI/BM 04 403 – INTRODUCTION TO MICROPROCESSORS

(2004 Admissions)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer **all** *questions.*

1. (a) List the addressing modes in 8085 with an example for each.

   (b) Compare memory mapped I/O and I/O mapped I/O modes in 8085.

   (c) What do you mean by T state, machine cycle and instruction cycle.

   (d) Explain : (i) CMA ; (ii) DAA ; (iii) ADC ; (iv) RRC ; (v) LDA.

   (e) Compare minimum and maximum modes of operation in 8086.

   (f) How does the queue speed up processing in 8086?

   (g) Briefly explain the concept of address decoding.

   (h) Compare synchronous and asynchronous serial data transmission.

(8 × 5 = 40 marks)

Part B

2. (a) Briefly explain the buses available in 8085.

   (b) Why is multiplexing required in 8085? Explain the operation.

(8 + 7 = 15 marks)

Or

3. (a) Explain the architecture of 8085 with a neat sketch.

   (b) Briefly describe all the flags in 8085.

(10 + 5 = 15 marks)

4. Write an 8085 program to convert two digit BCD numbers into their corresponding Binary.

Or

5. Write a program to find the number of even numbers, zeros and odd numbers in a block of memory locations in 8085.

(15 marks)

Turn over

6. (a) Explain the different addressing modes in 8086 with an example for each.

   (b) Explain the concept of memory segmentation in 8086.

(10 + 5 = 15 marks)

Or

7. Write an 8086 assembly language program to find whether the given year in BCD (4 digit number) is a leap year or not.

(15 marks)

8. With a neat block diagram, explain the working 8279 keyboard interface controller.

(15 marks)

Or

9. (a) With a neat block diagram of 8255 explain how 8255 I/O ports can be set up for BSR mode of operation.

   (b) List the different modes of operation of 8254.

(10 + 5 = 15 marks)

[4 × 15 = 60 marks]