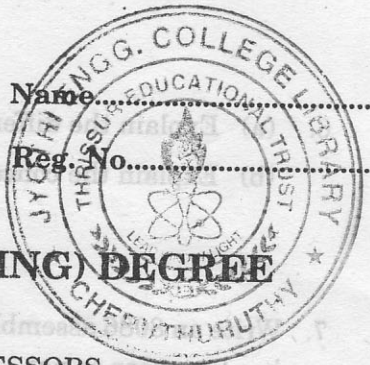


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**FOURTH SEMESTER B. TECH. (ENGINEERING) DEGREE  
EXAMINATION, JUNE 2010**

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]

Part B

- 2. (a) Briefly explain the buses available in 8086.
- (b) Why is multiplexing required in 8086? Explain the operation.

(8 + 7 = 15 marks)

Or

- 3. (a) Explain the architecture of 8086 with a neat sketch.
- (b) Briefly describe all the flags in 8086.

(10 + 5 = 15 marks)

- 4. Write an 8086 program to convert two digit BCD numbers into their corresponding Binary.

Or

- 5. Write a program to find the number of even numbers, zero's and odd numbers in a block of memory locations in 8086.

(15 marks)

Turn over