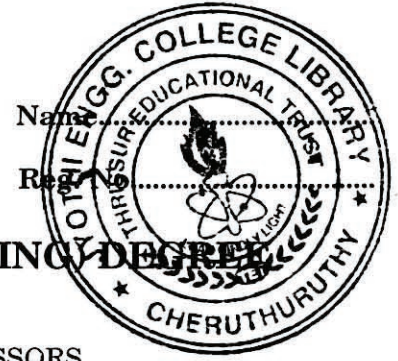


C 40961

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**FOURTH SEMESTER B.TECH. (ENGINEERING DEGREE)
EXAMINATION, APRIL 2013**

AI 09 404 – INTRODUCTION TO MICROPROCESSORS

(Regular/Supplementary/Improvement)

(2009 Scheme)

Time : Three Hours

Maximum : 70 Marks

Part A

1. What is memory mapped I/O and I/O mapped I/O?
2. What is the content of flag register after the execution of the following instructions :

MV1 A₁ 88 H

MV1 B₁ FF H

ADD B

STA 4500

HCT.

3. What is the purpose of Assembler directives?
4. What is the function of ICN4 in 8259?
5. What fetch cycle and execution cycle in 8085?

(5 × 2 = 10 marks)

Part B

Answer any four questions.

6. Explain the difference between microprocessor and microcomputer.
7. Write a program to count from 0 to 9 with a one second delay between each count. At the count of 9, the counter should reset itself to 0 and repeat the sequence continuously.
8. Explain the real and protected mode of operation of 8086.
9. Explain the working of a Digital to Analog converter.
10. Explain the model operation of 8255.
11. What is pipelining? How is it achieved in 8086? What are its advantages?

(4 × 5 = 20 marks)

Turn over

Part C

12. Discuss the various signals present in 8085 processor.

Or

13. (a) Explain the addressing modes of 8085 with an example.
(b) Write a note on memory organisation.

(6 + 4 = 10 marks)

14. (a) Write an ALP to find the sum of 20 numbers.
(b) Write a program to move a block of data from one location to another location of memory.

(4 + 6 = 10 marks)

Or

15. (a) Write a program to convert Binary to BCD numbers.
(b) Write a program to find the largest number in a given array of 10 numbers.
16. (a) Write a program to find the average of N numbers using 8086.
(b) Draw and explain the interrupt acknowledgement cycle using timing diagram.

Or

17. Describe the architecture of 8086.
18. Explain in detail the working of 8259.

Or

19. Discuss in detail, the working of DMA controller.

[4 × 10 = 40 marks]