

Reg. No.

(Pages: 2)

K4744

Name.

**SIXTH SEMESTER B.Tech. DEGREE EXAMINATION
MAY / JUNE – 2006**

**03.602 – MICROPROCESSOR AND APPLICATIONS (E)
(2003 Scheme)
Elective - I**

Time: 3 Hours

Max. Marks: 100

PART – A

Answer all questions.

1. What is the significance of tristate gates?
2. Briefly explain multiplexed bus.
3. Explain opcode fetch and execute cycles.
4. What are pseudo instructions? Give examples.
5. What is an assembler?
6. Generate a time delay by software technique.
7. What is meant by maskable and non-maskable interrupts?
8. What is meant by memory map?
9. Briefly explain programmable interrupt controller.
10. Explain power down mode and Idle mode of 8051 microcontroller.

(10 x 4 = 40 Marks)

PART – B

Answer any one full question from each module.

Module – I

- 11.a. Give the internal architecture of Intel 8085 microprocessor and explain each block.
- b. Distinguish between memory mapped I/O and I/O mapped I/O.

(20 Marks)

12. a. Explain the purpose of the following instruction with examples.

- (i) SUB B (ii) SBB B (iii) RAR
- (iv) CMP M & (v) RLC

b. Write an ALP to arrange a series of numbers in ascending order.

(20 Marks)

Module – II

13. a. Write a delay routine to implement a delay of 10 seconds if the processor clock speed is 3 MHz.

b. Draw the timing diagram for the execution of following instruction and explain.

MOV A, C In what way op code fetch cycle is different from a memory read cycle.

(20 Marks)

14. Write an ALP to perform multiplication by the number 10H. The program should be written in such a way that it takes minimum execution time.

(20 Marks)

Module – III

15. a. Show the interfacing of 8085 with the following:

- (i) 4K bytes of ROM with 2K x 8 chips.
- (ii) 2K bytes of RAM with 1K x 8 chips.

b. Explain how a set of six numbers of 7 segment LED's can be interfaced to 8085 microprocessor using 8255 PPI.

(20 Marks)

16. a. Explain the register structure of 8051 microcontroller.

b. Show how an 8 bit ADC can be interfaced with 8085.

(20 Marks)

(3 x 20 = 60 Marks)