(Pages : 2) **4709**

Reg. No. : .....

Name : .....

Fifth Semester B.Tech. Degree Examination, September 2014
(Special Supplementary)
08.505 : MICROPROCESSORS AND INTERFACING (R)

Time : 3 Hours Max. Marks : 100

PART – A

Answer **all** questions.

1. Write notes on externally initiated operations in 8085.
2. Draw the timing diagram of memory write.
3. Specify the four control signals commonly used by the 8085 MPU.
4. Discuss various addressing modes in 8085.
5. Explain the function of the following signals of 8086.
   i) TEST ii) LOCK
   iii) MN/MX iv) READY
6. What are the advantages of segmentation in 8086 ?
7. Write a program segment to generate a pulse every 50 micro seconds from counter 0 of 8254. The address counter 0 is 80 H and the clock speed of 8086 is 2 Mhz.
8. Explain how prefix instructions are executed in the microprocessor 8086.
9. What are all the software commands available in DMA controller 8237 ?
10. Explain 3 different operating modes of programmable peripheral interface 8255.

(10×4=40 Marks)

P.T.O.

PART – B

(Answer **any one** question from **each** Module)

MODULE – I

11. Explain with a diagram how a 12 bit DAC (Digital to Analog Converter) can be interfaced with 8085 microprocessor. 20

OR

12. a) Briefly discuss the programming model and Hardware model of 8085. 10

b) Draw the timing diagram for MVI 57 H. 10

MODULE – II

13. a) Explain the following instructions of the microprocessor 8086.

i) PUSH F ii) AAA

iii) IDIV BYTE PTR[BX] iv) REPNZ

v) SHL DX,1 vi) LODSB

vii) JMP 67H viii) CALL 1600 8

b) Classify the interrupts. Also explain the dedicated interrupts of 8086. 12

OR

14. a) Write an assembly language program to sort a set of 100 16 bit numbers in non decreasing order. 10

b) Explain the functional units of 8259 interrupt controller. 10

MODULE – III

15. Interface an 8255 PPI with the microprocessor 8086. 20

OR

16. An 8255 has a system base address of FFF10 H. What are the system addresses for the three ports and the control register for this 8255A ? Show the BSR mode control words needed to initialize an 8255, to set PC3 and to reset PC3. 20