(Pages : 2) 5774

Reg. No. : .....

Name : .....

Fifth Semester B.Tech. Degree Examination, November 2012
(2008 Scheme)
08.505 : MICROPROCESSORS AND INTERFACING (R)

Time : 3 Hours Max. Marks : 100

PART – A

Answer **all** questions. **Each** question carries **4** marks.

1. Explain the terms SSI, LSI, MSI.
2. Any information in the memory of a computer is stored as 1's and 0's. How does the processor know an item stored in a memory is a data or an instruction ?
3. Draw the timing diagram for opcode fetch.
4. Explain the functions of ALE and IO/M signal of the 8085 processor.
5. Compare and contrast 8086 with 8088.
6. What is LOCK prefix ? Explain its use.
7. Write an assembly language program to find the largest number in an unordered array of 8 bit numbers.
8. What are the minimum and maximum mode configuration ? State the importance of maximum mode configuration.
9. Explain the features of programmable peripheral Interface 8255.
10. List major components of 8251 USART and mention their functions.

(10×4=40 Marks)

P.T.O.

PART – B

Answer **any one** question from **each** Module.

Module – I

11. a) With a neat diagram, explain the functional units of 8085 microprocessor. 12

    b) It is required to interface one chip of 16 K × 8 ROM and one chip of 32 K × 8 RAM with 8085. ROM address starts at 000h. Show the implementation of this memory system. 8

OR

12. a) Draw and explain the schematic of a micro computer by illustrating processor, memory modules, address bus, data bus and control signals. 10

    b) Explain the pin configuration of 8085. 10

Module – II

13. a) Explain the physical memory organization in an 8086 system. What is the maximum memory addressing and I/O addressing capability of 8086. 10

    b) Briefly discuss the software and hardware interrupts of 8086. 10

OR

14. a) Write a subroutine that converts a given 16 Bit BCD number to its equivalent binary number. The BCD number is in register DX. Store the result in the same register DX. 10

    b) Draw the architecture of 8259 and explain the features available. 10

Module – III

15. Explain with a neat diagram the operation of the 8237 DMA controller. 20

OR

16. Explain the following terms in relation to the 8279 PKDC.

    a) Two Key Lock out

    b) N-Key rollover

    c) Right entry and Left entry

    d) FIFO. 20