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H – 4428

Reg. No. :

Name :

Sixth Semester B.Tech. Degree Examination, January 2020

13.603 MICROPROCESSORS AND APPLICATIONS (E)

(2013 Scheme)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions .

1. Explain the purpose of the following signals in 8085.
 - (i) READY
 - (ii) AD0-AD7
 - (iii) HOLD
 - (iv) IO/M
 - (v) INTR.
2. Write delay subroutine for 0.4 sec. Assume 3 MHz clock.
3. Calculate the value of each of the physical addresses in 8085.
 - (i) 1000H:1234H
 - (ii) 0100H:ABCDH
4. Why segmentation is needed in 8086. Explain.
5. Explain any 4 features of Pentium Processors.

(5 × 4 = 20 Marks)

P.T.O.



PART – B

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

Module – I

6. (a) Draw the architecture of 8085. Explain the function of each block. **15**
(b) Write a program to find the largest of 10 numbers **5**

OR

7. (a) What are the 5 different groups of 8085 instruction set. Explain each with examples. **10**
(b) Write a program to rearrange an array of 10 numbers in ascending order. **10**

Module – II

8. (a) Draw the timing diagram of instruction LDA 6200H and explain. **12**
(b) Explain about Hardware Interrupts and Software interrupts of 8085. **8**

OR

9. (a) Design memory systems to interface 2k ROM and 4k RAM using 2K X 8 – bit memory chips. **10**
(b) Differentiate between programmed data transfer and interrupt driven data transfer schemes. **10**

Module – III

10. (a) What are the different addressing modes of 8086. Explain each with example. **10**
(b) Write an assembly language program using 8086, to transfer a block of memory from memory location 20400h to 20500h. Assume the number of bytes to be transferred is stored in the count register. **10**

OR

11. (a) Draw the architecture of 8086 and Explain the registers. **12**
(b) Explain minimum mode operation of 8086. **8**



Module – IV

12. (a) Draw the internal architecture of PPI 8255 and explain. 10
- (b) Explain with diagram how DAC can be interfaced with 8085. Write a program to generate a triangular wave. 10

OR

13. (a) What are the different modes of operation of 8255. Explain. 10
- (b) Explain how matrix key board can be interfaced with 8086. 10

