

B.Tech. Degree IV Semester Examination April 2014

IT 1402 MICROPROCESSOR ARCHITECTURE AND SYSTEM DESIGN (2012 Scheme)

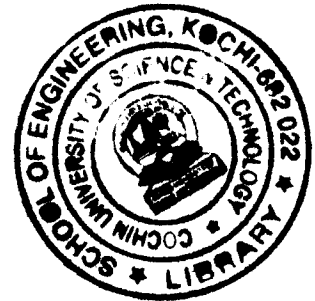
Time : 3 Hours

Maximum Marks : 100

PART A (Answer *ALL* questions)

(8 × 5 = 40)

- I. (a) Explain how 8086 generates 20 bit address.
 (b) Explain the function of following instructions
 (i) ALE (ii) TEST (iii) HOLD (iv) NMI
 (c) What are the basic modes of operation of 8255?
 (d) Explain how memory interfacing with 8086.
 (e) Explain need of DMA.
 (f) What are the various interrupts in 8086? Explain.
 (g) What are the basic differences between 80386 and 80486?
 (h) Explain the features of Pentium.



PART B

(4 × 15 = 60)

- II. Draw and explain the internal architecture of 8086. (15)
OR
 III. (a) Describe addressing modes of 8086 with suitable examples. (8)
 (b) Explain MIN/MAX mode operation of an 8086 processor? (7)
- IV. Explain in detail the internal architecture of 8255 and its registers with a neat block diagram. (15)
OR
 V. (a) Draw and explain the interface of 8279 to the 8086 microprocessor. (10)
 (b) Describe the three modes of operations for 8255 using relevant diagrams. (5)
- VI. Explain the working of 8257 controller with a neat block diagram. (15)
OR
 VII. Describe 8259 PIC architecture and interfacing, cascading of interrupt controller and its importance. (15)
- VIII. Draw and explain the functional block diagram of Pentium. (15)
OR
 IX. Draw and explain the internal architecture of 80386. (15)
