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B.Tech. Degree IV Semester Examination April 2018

CS 15-1402 MICROPROCESSORS (2015 Scheme)

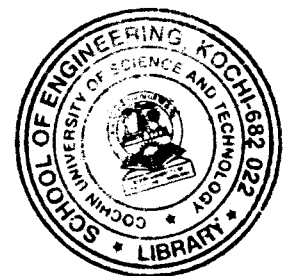
Time: 3 Hours

Maximum Marks: 60

PART A (Answer *ALL* questions)

(10 × 2 = 20)

- I. (a) Explain how the address and data is multiplexed in 8085 microprocessor.
- (b) What are the functions of BIU in 8085?
- (c) Explain the different types of interrupts used in 8085 microprocessor.
- (d) Differentiate between I/O mapped I/O and memory mapped I/O techniques.
- (e) Describe the addressing modes in 8085 μ P.
- (f) Explain the different types of registers used in 8085 μ P.
- (g) Explain the functions of the following signals in 8086 μ P.
(i) DLE (ii) DT/R (iii) DEN (iv) BHE.
- (h) Explain briefly about DMA operation.
- (i) Explain BSR mode of operation of 8255 in detail.
- (j) List the features of 8259.



PART B

(4 × 10 = 40)

- II. With neat diagram explain the architecture of 8085 μ P in detail. (10)
OR
- III. (a) With the help of a pin diagram of 8085 μ P explain the functional details of pins. (7)
- (b) Explain how the control signal is generated in 8085 μ P mode of operation. (5)
- IV. (a) Write an ALP in 8085 to exchange a block of N bytes of data between source and destination. (7)
- (b) Explain various flow control instructions of 8085 μ P. (3)
- OR
- V. (a) Write an ALP to arrange a given series of hexa decimal bytes in ascending order. (5)
- (b) Write an ALP to display first n prime numbers. (5)
- VI. Explain the maximum and minimum mode in 8086 with necessary block diagram. (10)
OR
- VII. (a) How are 8086 instructions classified? Explain in detail with example. (7)
- (b) Briefly explain assembler directives in 8086 μ P. (3)
- VIII. (a) Draw and explain the interface between memory and 8085 μ P. (6)
- (b) Write short notes on various ports available in 8255. (4)
- OR
- IX. Explain the different modes of operation of 8254 timer using relevant waveforms. (10)