1078
B.E. (Electronics and Communication Engineering)
Fifth Semester
EC-504: Advanced Microprocessors

Time allowed: 3 Hours   Max. Marks: 50

NOTE: *Attempt <u>five</u> questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.*

x-x-x

I.   Attempt the following:-

a) Differentiate between the terms: RPL and DPL.

b) Explain the terms linking and relocation using appropriate example.

c) Give the function of LOCK and TEST instruction.

d) Do conversion for math co processor: 85.27 into short real,

e) What is LI cache and how it is different from L2 cache?   (5x2)

UNIT – I

II.   a) Find number of times letter 'e' exist in the string "exercise". Store the count at memory location,

b) What are the different interrupt types in 8086? Explain with proper diagram.
                                                                        (6,4)

III.   a) WAP to find the minimum from a block of N 16 bit numbers using procedure.

b) What are the various schemes of data transfer between the microprocessor and I/O. Explain the DMA method of data transfer.   (6,4)

IV.   a) Draw the logical block diagram of the 8086 processor and explain each part in brief.

b) WAP to arrange an series of given hexadecimal bytes in ascending order using the bubble sort method.   (6,4)

UNIT – II

V.   a) Explain using the proper diagram how the address translation of a logical address to a physical address is done in case of 80386 processor?

b) What are the special purpose registers in the 80386? List them and give their purpose.   (5,5)

P.T.O.

VI.   a) Explain the pins of 80386 processor: PEREQ, ADS, NA, BE.

      b) Discuss the communication between 8086 and 8087 processor .Also explain the status word and TAG word of 8087.   (5,5)

VII.   a) Draw the timing diagram of 8086 I/O read and write-cycle in maximum mode. Also draw and explain the function of various signals used in maximum mode.

      b) Explain the importance of the access byte of the descriptor with individual pins description.   (7,3)

x-x-x