1129
B. E. (Computer Science and Engineering)
Third Semester
CS-304: Microprocessors

Time allowed: 3 Hours   Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit. Any missing data may be assumed suitably.

x-x-x

I.   Attempt the following:-

a) What is the use of ALE pin?

b) Draw and explain the timing diagram of LDA 7FFE.

c) Explain the conditional Call statements of 8085.

d) What is vectored interrupt?

e) Highlights the different blocks of programmable communications .interface 8251.

                                                                              (5x2)

UNIT – I

II. a) Explain the different addressing modes of 8085 microprocessor with suitable examples.

b) Write an assembly level program to multiply given three numbers.   (2x5)

III. a) Write an assembly level program to count given 10 numbers.

b) Specify the contents of the registers and the flag status as the following instructions are executed.
   MVI A,OOH
   MVI B, F8H
   MOV C,A
   MOV D,B
   HLT
                                                                              (2x5)

IV. a) Explain the following instructions with suitable example of each.
        (i) LXI (ii) SHLD

b) Explain how memory mapping is done with suitable example.   (2x5)

UNIT – II

V.   Write an 8085 program to generate a time delay of 0.4 sec given crystal frequency 5 MHZ.
                                                                              (10)

P.T.O.

VI.   a) Explain the stack memory of 8085 microprocessor with the help of instructions and neat diagrams in detail.

     b) Draw the microprocessor bus timing for the instruction STA 4500H and explain it

(2x5)

VII.   a) Draw and explain block diagram of 8259A programmable interrupt controller in detail. Explain control word definition of the same.

     b) Draw the architecture along with the control words of 8257 DMA controller. (2x5)

x-x-x