

Bachelor of Science (B.Sc.) Semester–V (C.B.S.) Examination

FUNDAMENTALS OF MICROPROCESSOR

Paper—2

(Electronics)

Time : Three Hours]

[Maximum Marks : 50

- N.B. :—** (1) All questions are compulsory and carry equal marks.
(2) Draw neat diagrams wherever necessary.

EITHER

1. (A) Draw and explain functional block diagram of 8085. 10

OR

- (B) Explain instruction cycle of 8085. Explain execution cycle of MOV A, B instruction. 6+4

EITHER

2. (A) Explain the following instruction with one suitable example : 10
(i) MOV A, M
(ii) LXI D, 16 bit data
(iii) CMA
(iv) LHLD addr
(v) RAR.

OR

- (B) Assume that HL pair holds 2000 H. What will be the contents of HL pair after the execution of following instructions independently :

- (i) INX H (ii) DCX H
(iii) INR H (iv) DCR L

Explain various addressing modes of 8085 with suitable example. 4+6

EITHER

3. (A) List various conditional and unconditional jump instructions of 8085. Write an ALP to find out the smaller of two 8-bit numbers stored in memory location 2100 H and 2101 H. Store the result in 2102 H. 6+4

OR

- (B) Explain stack and subroutine operations of μ p 8085. Explain the execution of PUSH and POP instruction with suitable example. 6+4

EITHER

4. (A) Define synchronous and asynchronous data transfer schemes. Draw and explain block diagram of 8255 PPI. 2+8

OR

- (B) What is the necessity of interfacing I/O devices ? Explain interrupt driven data transfer scheme. 2+8

5. Solve any **ten** questions in brief from the following :

- (A) Write bit pattern of flags in flag register of 8085.
(B) What is ALE ?
(C) State the function of PC in 8085.
(D) What will be the contents of accumulator after the execution of instruction XRA A ?
(E) Write program to complement the content of register E.
(F) List various groups of instruction set in 8085 microprocessor.
(G) List any two conditional return instruction.
(H) List any two conditional call instructions.
(I) List any two, three byte instruction on 8085 μ p.
(J) What is long form of DMA ?
(K) What is BSR mode of 8255 ?
(L) What is PPI ? 1×10