Bachelor of Science (B.Sc.) (Semester–V) (C.B.S.)
Examination
FUNDAMENTALS OF MICROPROCESSOR
Paper—2
(Electronics)

Time—3 Hours] [Maximum Marks—50

N.B. :— (1) All **FIVE** questions are to be attempted.

(2) All the questions carry equal marks.

EITHER

1. (A) Draw the functional block diagram of microprocessor 8085 and explain in brief the role of each block. 10

OR

(B) Define Machine Cycle and instruction cycle of 8085.

Explain the execution cycle of MVIA, byte instruction.

How is demultiplexing of address and data bus done ? Explain. 2+4+4

EITHER

2. (A) Describe following instruction, also mention bytes, flag affected and addressing mode.

(1) SHLD addr.

(2) DAD D

(3) XRI data

(4) CNZ addr

(5) HLT. 10

OR

(B) (a) Explain various addressing modes of 8085.

(b) Write an 8085 ALP for addition of three 8-bit numbers N_1, N_2, N_3 stored at consecutive memory locations starting from 6030 H. Store sum $N_1 + N_2 + N_3$ at 6051 H. 5+5

EITHER

3. (A) What is Stack ? How is it initialized ? Explain necessity of stack.

Explain execution of PUSH and POP instructions. 4+6

OR

(B) Explain the execution of conditional and unconditional JUMP instructions of 8085.

Write ALP for finding greater of two numbers stored in memory 4100 H 4101 H and store it in 4102 H. 5+5

EITHER

4. (A) Explain the concept and necessity of interfacing.

(B) Discuss Synchronous and Asynchronous data transfer schemes used in 8085. 5+5

OR

(A) What is a Programmable Peripheral Interface ? Draw the block diagram of PPI 8255. Explain the role of each block.

(B) Write the control word format for BSR mode. 8+2

5. (A) Explain flag register of 8085.

(B) Differentiate between SUB B and CMP B instruction.

(C) What is Subroutine ? Explain its need.

(D) Explain interrupt driven data transfer scheme. 4×2½