NA—156—2023

FACULTY OF SCIENCE

B.Sc. (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(New)

ELECTRONICS

Paper-VII

(Microprocessor and its Applications)

(Friday, 22-12-2023)   **Time : 2.00 p.m. to 4.00 p.m.**

Time—2 Hours   *Maximum Marks—40*

N.B. :—   (*i*)   Attempt *all* questions.

       (*ii*)   Draw neat and labelled diagrams wherever necessary.

       (*iii*)   Numbers to the right indicate full marks.

1.   Draw block diagram of microprocessor 8085. Explain importance of accumulator and temporary register in execution of arithmetic and logical instructions. 15

Or

(*a*)   Define machine cycle in microprocessor 8085 and enlist basic machine cycles in 8085 with their required T– States.   8

(*b*)   Explain register and direct addressing modes in microprocessor 8085 with *two* examples of each mode of addressing as above.   7

2.   Write ALP for :   15

(*i*)   Addition of two 8-bit numbers (sum-8-bit)

(*ii*)   1's complement of a byte.

<div align="right">P.T.O.</div>

(*iii*) 2's complement of a byte.

(*iv*) Subtraction of two 8-bit numbers.

Or

(*a*) Draw block diagram of IC 8255   8

(*b*) Write an ALP to find sum of series of numbers.   7

3. Write short notes on (any *two*) :   10

(*a*) Program counter

(*b*) Instruction cycle

(*c*) Delay Subroutine using register pair

(*d*) Operating modes of IC 8255