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ND—27—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (Second Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/Revised Pattern)

COMPUTER SCIENCE

(8085 Microprocessor)

(Thursday, 7-12-2023)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours   *Maximum Marks—75*

N.B. :— (*i*)   *All* questions are compulsory.

(*ii*)   Figures to the right indicate full marks.

(*iii*)   Assume suitable data, if required.

(*iv*)   Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1.   Attempt any *five* of the following (**3** marks each) :   15

(*a*)   Explain Opcode and Operand.

(*b*)   What is Mnemonics in microprocessor ?

(*c*)   Address and Data Bus of 8085 microprocessor.

(*d*)   What is instruction cycle in 8085 MP ? Explain it.

P.T.O.

(e)   Machine cycle.

(f)   What is instruction set in 8085 microprocessor ?

(g)   Interrupt signals of 8085 microprocessor.

2.   Attempt any *three* of the following (**5** marks each) :   15

(a)   Explain various features of microprocessor 8085.

(b)   Explain interrupts and peripheral initiated signals in 8085 MP pin configuration.

(c)   Explain internal block diagram of microprocessor 8085.

(d)   Explain general purpose registers.

(e)   What is direct addressing mode ? Explain any *two* instructions of direct addressing in microprocessor 8085.

3.   Attempt any *three* of the following (**5** marks each) :   15

(a)   Explain any *five* data transfer group instructions of microprocessor 8085.

(b)   Explain immediate addressing mode with example.

(c)   Explain the following instructions in detail :

(i)   DAA

(ii)   LHLD addr.

(d)   Explain implicit addressing mode with example.

(e)   Write an ALP program for microprocessor 8085 to add two 16 bit numbers.

4. Attempt any *three* of the following (**5** marks each) : 15

   (*a*) Explain any *five* logical group instructions of microprocessor 8085.

   (*b*) What is Arithmetic group of instructions ? Explain any *three*.

   (*c*) Explain any *five* branch control group instructions of microprocessor 8085.

   (*d*) What is data transfer group of instructions ? Explain any *three*.

   (*e*) Write an ALP program for microprocessor 8085 to find square of 8 bit number.

5. Write short notes on any *three* of the following (**5** marks each) : 15

   (*a*) Instruction format

   (*b*) Advantages of Assembly Language programming

   (*c*) Fetch cycle and Execute cycle

   (*d*) Branch control group of instruction

   (*e*) Flags of 8085 microprocessor.