# 6433

## BOARD DIPLOMA EXAMINATION, (C-16)

## OCTOBER/NOVEMBER—2023

## DCME – FOURTH SEMESTER EXAMINATION

MICROPROCESSORS

*Time* : 3 Hours ]                                                    [ *Total Marks* : 80

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**PART—A**                                                              3×10=30

**Instructions :** (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define microcomputer and microprocessor.

2. Draw the timing diagram for MEMR (Memory Read) operation in minimum mode.

3. Define an assembler.

4. List any three branch instructions.

5. List various categories of interrupts.

6. Write an 8086 assembly language program to multiply two eight bit numbers.

7. What is the use of CALL instruction?

8. List any three features of 80386.

9. Write a short note on internal memory of 8051.

10. List any three 8051 microcontroller family chips.

**Instructions :** (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

**11.** *(a)* Explain the registers of 8086 microprocessor. 5

*(b)* List any five instructions affecting flags of 8086 microprocessor. 5

**12.** Explain any five arithmetic instructions of 8086 microprocessor with suitable examples. 10

**13.** *(a)* Explain about processor control instructions. 5

*(b)* Write an assembly language program to find 2's compliment of an 8-bit number. 5

**14.** Draw the block diagram of 8259 (PIC) and explain the function of each block. 10

**15.** Explain the procedure to execute 8086 assembly language program with assembler. 10

**16.** Compare advanced Pentium processors. 10

**17.** Draw the functional block diagram of 8051 microcontroller and explain each block. 10

**18.** Explain the interrupts in 8051 microcontroller. 10

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