C16-CM-IT–404

6433

BOARD DIPLOMA EXAMINATION, (C-16)

MAY/JUNE—2023

DCME - FOURTH SEMESTER EXAMINATION

MICROPROCESSORS

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

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. Distinguish between microprocessor and microcomputer.

2. Write the function of NMI, ALE and RESET pin of 8086 processor.

3. List any six addressing modes of 8086.

4. Mention the use of linker and debugger.

5. List different types of interrupts in 8086 microprocessor.

*   6. Differentiate between CALL and RET instructions.

7. Write a program to evaluate $(A - B)^2$.

8. Write any six features of 80486.

9. Write short note on Mode-3 timer controller.

10. List different special function registers of 8051.

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)* Draw the timing diagram of memory read operation in minimum mode. 5

(b) Write a program to find the sum of 'N' natural numbers. 5

12. Explain any five unconditional branch instructions. 10

13. Explain about various assembly language program development tools. 10

14. Explain the process of implementing interrupts with the help of interrupt vector table in 8086. 10

15. What is the use of subroutine? Explain the execution of a program calling a subroutine. 10

16. Explain the architecture of Pentium microprocessor. 10

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

18. Explain the internal memory organization of 8051 microcontroller. 10

★ ★ ★