C16-CM-IT–404

6433

BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

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. Write the function of ALE, TEST and INT pin of 8086 processor.

2. How 8086 processor calculate physical address of memory?

3. List any six data transfer instructions.

4. What is the use of linker and locator?

5. Differentiate between software and hardware interrupts of 8086.

6. Write short note on CALL and RET instructions.

7. Write an assembly language program to add two 16-bit numbers.

8. Write any six features of 80386.

9. List different interrupts of 8051 microcontroller.

10. Write short note on mode-3 timer controller.

PART—B

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 for memory read operation in minimum mode. 5

(b) Write an assembly language program to find average of array of 8-bit numbers. 5

12. Define addressing mode. Explain different addressing modes with example. 10

13. *(a)* Explain any six assembler directives. 6

(b) Explain any four Arithmetic instructions. 4

14. Explain interrupt handling process in 8086. 10

15. *(a)* Explain about parameter passing in procedures. 6

(b) Write a program to compare two 8-bit numbers, if both are equal transfer 0 to CL register, otherwise transfer 1 to CH register. 4

16. Draw and explain the architecture of Pentium processor. 10

17. Explain register structure of 8051 microcontroller. 10

18. Explain serial input and output ports of 8051. 10

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