BOARD DIPLOMA EXAMINATION, (C–16)

OCTOBER—2020

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. Define micro-computer and microprocessor.

2. List any three groups of registers in 8086 microprocessor.

3. List any three arithmetic instructions of 8086 microprocessor.

4. List any three string manipulation instructions of 8086 microprocessor.

5. Define an interrupt.

6. Write 8086 assembly language program to add two 8-bit numbers.

7. List hardware interrupts of 8086 microprocessor.

8. List any three features of 80286 processor.

9. List any three features of 8051 microcontroller.

10. Write a short note on internal memory of 8051 microcontroller.

PART—B

10×5=50

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

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

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

11. *(a)* Draw the internal architecture of 8086 microprocessor and explain function of each unit. 5

(b) List any five addressing modes and explain. 5

12. Explain any 10 assembler directives of 8086 microprocessor.

13. *(a)* Define Linker and Debugger. 5

(b) Write an assembly language program to find 2's compliment of a 8-bit no. 5

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

15. Write an assembly language program to sort 5 numbers in an ascending order.

16. Differentiate between 80286, 80386 and 80486 processors.

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

18. Explain function of various special function registers in 8051 microcontroller.

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