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BOARD DIPLOMA EXAMINATION, (C-16)

MARCH / APRIL — 2021

DCME — THIRD SEMESTER EXAMINATION

MICROPROCESSORS

Time : Three Hours] [*Maximum Marks* : 80

PART-A 3×10=30

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

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

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

1. Write any three differences between microcomputer and microprocessor.

2. List the general purpose registers of 8086 microprocessor.

3. Write down the purpose of NMI and INTR pins of 8086 microprocessor.

4. List various flags of 8086 microprocessor.

5. Write the significance of assembly language programming.

6. What is subroutine ? List the advantages of subroutines.

7. Write the features of 8259.

8. Write any three features of 80286 microprocessor.

9. Write any three features of 8051 microcontroller.

10. State the functions of program counter and data pointer registers.

PART-B

10×5=50

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

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

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

11. (*a*) Explain the internal architecture of 8086 microprocessor.

(*b*) Explain any five assembler directives of 8086 microprocessor.

12. Explain in detail about shift and rotate instructions of 8086 microprocessor.

13. (*a*) Explain various processor control instructions of 8086 microprocessor.

(*b*) What is an Interrupt ? Explain how an interrupt is serviced ?

14. Explain about the initialization control words of 8259.

15. Write an assembly language program to find factorial of given number using a subroutine.

16. Explain the architecture of Pentium processor.

17. Explain the functional block diagram of 8051 microcontroller.

18. Explain various modes of operation of timers in 8051 microcontroller.

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