C14–CM–404/C14–IT–**404**

4452

BOARD DIPLOMA EXAMINATION, (C–14)

MARCH/APRIL—2017

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. Draw timing diagram of memory read cycle.

2. Define the terms *(a)* compiler and *(b)* interpreter.

3. List the groups of 8086 instruction set.

4. Define assembler directive.

5. What is an interrupt?

6. Write an assembly language program to reverse an 8-bit number.

7. Differentiate between subroutine and macro.

8. Write about operating modes of 8255.

9. List the various peripheral chips.

10. List the features of 80286.

PART—B   10×5=50

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

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

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

11. Draw the pin diagram of 8086 and explain the function of each pin.   3+7=10

12. Explain arithmetic and logical instructions of 8086 with examples.   5+5=10

13. What is an addressing mode? Explain various 8086 addressing modes.   2+8=10

14. Explain various interrupt groups supported by 8086.   10

15. *(a)* Explain CALL and RETURN instructions.   5

(b) Write an assembly language program (ALP) to find the length of a string.   5

16. Draw and explain the block diagram of 8279 keyboard/display controller.   10

17. *(a)* Explain DMA data transfer scheme.   5

(b) Explain the block diagram of 8251 USART.   5

18. Draw the block diagram and explain the architecture of 80486 microprocessor.   3+7=10

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