



C14-CM-404/  
C14-IT-404

**4452**

**BOARD DIPLOMA EXAMINATION, (C-14)  
MARCH/APRIL—2018  
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. What are the functions of micro-processor? Name the basic functional units inside a micro-processor.
2. What are the segments register of 8086?
3. Explain the logical instruction of 8086 (a) SAR (b) SHL (c) SAL.
4. List any three assembler directives with examples.
5. What are Hardware and Software interrupts?
6. What is parameter passing in procedures?
7. Classify the interrupts in 8086 and state the need of interrupts.
8. What is interfacing?
9. Write the features of DMA controller (8257).
10. What are architectural differences between 80386 and 80486?

**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.** Explain the arithmetic instructions of 8086 with examples.
- 12.** Explain any four string manipulation instructions of 8086.
- 13.** Explain the working of programmable peripheral interface (8255) with block diagram.
- 14.** Explain the working of USART (8255) with block diagram.
- 15.** Write assembly language program to perform addition and subtraction of two 16-bit numbers.
- 16.** Describe the important features of programmable interrupt controller 8259?
- 17.** (a) How an interrupt is serviced? Explain it.  
(b) Draw and explain the timing diagram of memory-Read Cycle.
- 18.** Explain the block-diagram of Pentium-IV processor.

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