C16–CM–404/C16–IT–404

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BOARD DIPLOMA EXAMINATION, (C–16)
OCT/NOV—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. Define instruction cycle and machine cycle.

2. List the registers of 8086.

3. Write the use of CALL and RET instructions of 8086.

4. List the processor control instructions of 8086.

5. Differentiate between software and hardware interrupts of 8086.

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

7. What are modes of operation of 8259.

8. List the features of Pentium–II processor.

9. Differentiate between microprocessor and microcontroller.

10. List the ports 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 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) Explain any five shift and rotate instructions of 8086. 5

12. *(a)* Explain any five program control transfer instructions of 8086. 5

(b) Explain any five string manipulation instructions of 8086. 5

13. What is assembler directive? Explain any five assembler directives with suitable examples. 10

14. Explain various interrupts supported by 8086. 10

15. *(a)* Draw the neat block diagram of 8259 interrupt controller and mark its components. 5

(b) Write an assembly language to find the largest number from unordered array of 8-bit numbers. 5

16. Explain the architecture of Pentium processor with neat block diagram. 10

17. Draw the pin diagram of 8051 microcontroller and specify the function of each pin. 10

18. Draw the register structure of 8051 microcontroller and explain. 10

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