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C16–EC–403

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BOARD DIPLOMA EXAMINATION, (C–16)

SEPTEMBER/OCTOBER - 2020

DECE—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 opcode and operand of an instruction.

2. Write the syntax for the following instructions of 8085 :

(a) LDA

(b) OUT

3. List the general purpose registers of 8086 and state their uses.

4. State the need of interrupts.

5. List any three string manipulation instructions of 8086.

6. Generate the machine code for the instruction MOV AX, [SI]. The opcode for MOV is 100010.

7. Write an 8086 Assembly Language Program to perform addition of two 16-bit numbers 1234H and 1010H. Store the result in the locations 1200H and 1201H.

8. Distinguish between the following :

(a) Near CALL

(b) Far CALL

9. List the operating modes of 80386 microprocessor.

10. List any six 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 8085 microprocessor and state the function of each pin.

12. *(a)* Explain the instruction queue and its storage. 5

(b) Illustrate the generation of 20-bit physical address in 8086 with an example. 5

13. *(a)* Write any five differences between 8-bit and 16-bit microprocessors. 5

(b) List different flags of 8086 and state their use. 5

14. Explain any five logical instructions of 8086.

15. Explain any five addressing modes of 8086.

16. Write an 8086 Assembly Language Program to find the smallest of 'N' 8-bit numbers.

17. Explain the architecture of 80386 with a neat diagram.

18. Write any five differences among 80286, 80386, 80486 and Pentium processors.

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