C09–CM–**405**

3462

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2014

DCM—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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List the general purpose registers of 8086 and write their functions.

2. Write any three differences between a microprocessor and a microcomputer.

3. State the use of editor and assembler.

4. Explain any two addressing modes with examples.

5. Explain briefly about how to execute assembly language program using assembler.

6. State the features of interrupt controller (8259).

7. What is parameter passing in procedures?

8. State the features of USART (8251).

9. State the features of keyboard/display controller (8279).

10. List any six features of 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 criterion for valuation is the content but not the length of the answer.

11. Explain the arithmetic instructions of 8086 with example.

12. Explain any five control transfer (branch) instructions of 8086 with examples.

13. What is an interrupt? Explain about interrupts of 8086.

14. What is a subroutine? Explain the CALL and RETURN instructions.

15. Explain the working of DMA controller (8257) with block diagram.

16. Explain the working of programmable peripheral interface (8255) with block diagram.

17. Explain the architecture of Pentium pro processor.

18. *(a)* Draw the timing diagram of memory write cycle.

(b) Write an 8086 program to add two 16-bit numbers in CX and DX, and store the result in location 0500 H addressed by DI.

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