C09–CM–**405**

3462

BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2013

DCM—FOURTH SEMESTER EXAMINATION

MICROPROCESSORS

Time : 3 hours] [*Total Marks* : 80

PART—A

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. What is bus cycle? List bus cycles of 8086.

2. List various registers of the bus interface unit of 8086.

3. Explain XCHG and LEA instructions.

4. State the use of linker and debugger.

5. Write an assembly language program to add two 16-bit numbers with identifiers NUM1, NUM2 and store the 16-bit result at NUM3.

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

7. Classify the interrupts of 8086.

8. What is direct memory access (DMA)? State its need.

9. List any six features of keyboard/display controller (8279).

10. List any six features of 80486.

PART—B

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. Briefly explain any five instructions that affect flags of 8086.

12. Explain any five addressing modes of 8086 with examples.

13. Write an assembly language program to find the largest of 'N' 8-bit numbers stored from SOURCE. Store the largest number at RESULT.

14. What is a subroutine? Explain the CALL and RET instructions of 8086.

15. Draw the block diagram of programmable peripheral interface (8255) and state its modes of operation.

16. Explain the working of USART (8251) with block diagram.

17. Draw the internal block diagram of Pentium processor and state the function of each block.

18. *(a)* Explain how a Microcomputer fetches and executes an instruction.

(b) Explain parameter passing in procedures.

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