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C09–CM–405

3462

BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—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) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. What are microcomputer and microprocessor?

2. Write the function of ALE and MN/$\overline{MX}$ pins of 8086.

3. Explain XOR and TEST instructions.

4. List any two iteration control instructions of 8086 and state their function.

5. Write an assembly language program to find the two's complement of an 8-bit number available at NUM and store the result at COMP.

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

7. What is parameter passing in procedures?

8. Write the features of DMA controller (8257).

9. State the need for communication interface.

10. List any six features of 80386.

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 generalized instruction format of 8086.

(b) Explain based indexed addressing and relative based indexed addressing modes of 8086 with examples.

12. Explain the use of Editor, assembler, linker, locator and debugger.

13. *(a)* What is an interrupt? Classify interrupts of 8086.

(b) Explain the interrupts of 8086.

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

15. Draw and explain the block diagram of keyboard/display controller (8279).

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

17. Draw and explain the internal structure of Pentium pro-processor.

18. *(a)* List the pointer and index registers of 8086 and state their function.

(b) Write an 8086 program to find the average of five 16-bit numbers.

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