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C09–EC–**404**

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BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2013

DECE—FOURTH SEMESTER EXAMINATION

MICROPROCESSORS

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

PART—A

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 is accumulator? State its importance in the CPU.

2. Define micro- and macro-operation.

3. State the purpose of pointer and index registers.

4. Write the need for interrupt.

5. State the need of memory segmentation in Intel8086.

6. Describe any three control transfer (branch) instructions of 8086.

7. Write the generalized instruction format of 8086.

8. Write an assembly language program to perform 16-bit addition. One 16-bit number is stored in the location 1100H and 1101H. The other 16-bit number is stored in the location 1102H and 1103H. Store the result in the location 1104H and 1105H.

9. Explain the superscalar architecture.

10. Describe the instruction level parallelism.

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. *(a)* Explain the cache memory organization.

(b) Explain the memory interleaving.

12. Explain zero-address, one-address, two-address and three-address instructions with one example each.

13. Describe the block diagram and bus cycle timing diagram of 8086 minimum mode.

14. Explain sequential processing, parallel processing and pipeline processing.

15. Explain the assembly language development tools.

16. Explain the sequence of subroutines or procedure programming.

17. Explain the architecture of 80486 with neat diagram.

18. Explain the architecture of 80286 with neat diagram.

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