C09–CM–405

3462

BOARD DIPLOMA EXAMINATION, (C–09)

APRIL/MAY—2015

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 is bus cycle? List bus cycles of 8086.

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

3. Draw the generalized instruction format of 8086.

4. State any three assembler directives.

5. Write the procedure for executing an assembly language program with an assembler.

6. What is parameter passing in procedures?

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

8. List the features of programmable peripheral interface (8255).

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

10. List any six features of 80286.

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 control transfer (branch) instructions of 8086 with examples.

12. Briefly explain the following instructions of 8086 with examples :

(a) INC

(b) ADC

(c) MUL

(d) NEG

(e) DIV

13. Write an 8086 program to arrange the ten 8-bit numbers stored in memory starting with address array in ascending order.

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

(b) Explain the interrupts of 8086.

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

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

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

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

(b) Explain the CALL and RET instructions of 8086.

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