MAY 2012

P/ID 17457/ RCG/PCAD

Time : Three hours Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) What are the various logical instructions in 8086. Explain their execution with examples.

Or

(b) Write an assembly language program to sort an array of ten names in ascending order.

2. (a) What is an assembler directive? Explain with any three examples.

Or

(b) How are procedures used in 8086 programming? Give example.

3. (a) What is an interrupt? Explain any five interrupts of 8086 with examples.

Or

(b) What are the various bus signals of 8086? Explain.

4. (a) What is handshaking? Explain how handshaking input and output works. Give examples.

Or

(b) What is the use of interfacing? Differentiate analog and digital interfacing.

5. (a) What is the need for a cache memory? Explain its functionality.

Or

(b) Differentiate 80286 and 80386 with respect to Input-Output capabilities.

PART B — ($5 \times 10 = 50$ marks)

Answer any FIVE questions.

6. (a) Explain the various arithmetic and logical operation that are performed in 8086 with examples.

(b) Write an assembly language program to insert a delay of 600 μ sec with a 10Mhz clock.

7. (a) Write an assembly language program to calculate the factorial of a number using procedure.

   (b) What is a macro? Explain how macros are written in 8086. Give suitable examples.

8. Explain how 8086 works in minimum mode. Highlight the signals and commands that work in this mode .

9. Discuss on the working principle of an interrupt controller with a neat diagram.

10. Explain how I/O interfacing is performed with 8086.

11. Describe 8086 based process control system.

12. What is the need for a DMA? Explain the working principle of a DMA with 8086.

13. Explain, with a neat diagram, how analog interfacing takes place with 8086.

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