2013

Time: 3 hours

Full Marks: 80

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from both the Groups as directed.

Group — A

(Objective Type Questions)

1. Choose the correct answer of the following:

2\times 10 = 20

(a) DMA stands for:
   (i) Dual Memory Address
   (ii) Direct Memory Address
   (iii) Dynamic Memory Address
   (iv) Digital Memory Address

(b) ROM stands for:
   (i) Read Optical Memory

UK – 19/4 (Turn over)
(ii) Random Organization Memory
(iii) Read Only Memory
(iv) None of the above

(c) CISC stands for:
   (i) Cyclic Instruction Set Code
   (ii) Complex Instruction Set Computer
   (iii) Complex Instruction System Cycle
   (iv) None of the above

(d) ADC stands for:
   (i) Analog Device and Circuit
   (ii) Analog to Digital Converter
   (iii) Advance Digital Code
   (iv) None of the above

(e) MIPS stands for:
   (i) Mega Instruction Per Second
   (ii) Million Instruction Per Second
   (iii) Mean Instruction Per System
   (iv) None of the above

(f) CPU stands for:
   (i) Complex Programming Unit

UK - 19/4 (2) Contd.
(ii) Central Peripheral Unit
(iii) Central Processing Unit
(iv) None of the above

(g) BIOS stands for:
(i) Byte Instruction Operating System
(ii) Basic Input Output System
(iii) Bit Information Optical Storage
(iv) None of the above

(h) DSP stands for:
(i) Digital Signal Processor
(ii) Dual Signal Port
(iii) Dynamic System Program
(iv) None of the above

(i) MAR stands for:
(i) Memory Access Register
(ii) Memory Address Register
(iii) Machine Address Register
(iv) None of the above

(j) DRAM stands for:
(i) Dynamic Read Access Memory

UK – 19/4 (3) (Turn over)
(ii) Digital Random Access Memory
(iii) Dynamic Random Access Memory
(iv) None of the above

Group – B
(Long-answer Type Questions)
Answer any four questions.

2. (a) Draw and explain various functional units of 8086 microprocessor. What are the important signals of 8086?
(b) How many operating mode does 8086 have? Discuss them in brief.

3. (a) Discuss the various addressing modes of 8086 with suitable examples.
(b) What do you understand by hardware interrupt and software interrupt? Discuss the interrupt system of 8086.

4. (a) What is DMA? Discuss the function of DMA controller 8237.
(b) Differentiate between Static and Dynamic RAM.

UK – 19/4 (4) Contd.
5. (a) Discuss programmable peripheral interface and its applications.  
(b) Discuss programmable communication interface in brief. What are its different operating modes?  

6. (a) What are registers? Discuss the register organisation and function of each register of 8086.  
(b) Discuss the important features of pentium processor. In what way does it differ from 80486 and 80386 microprocessors?  

7. Write short notes on any three of the following:  
5×3 = 15  
(a) ADC and DAC  
(b) Virtual Memory Mode  
(c) Disk Memory Systems  
(d) Bus Buffering Vs Latching  
(e) Programmable Keyboard / Display Interface