Code: IT5T3

III B.Tech - I Semester – Regular Examinations - November 2014

MICROPROCESSORS AND INTERFACING
(INFORMATION TECHNOLOGY)

Duration: 3 hours   Marks: 5x14=70

Answer any FIVE questions.   All questions carry equal marks

1. a) Explain the functioning of following registers of 8086 microprocessor: 8 M
   (i) Segment registers,   (ii) Pointer registers,
   (iii) Index registers

   b) Explain the physical memory organization in an 8086 system.   6 M

2. a) Write an 8086 assembly language program to arrange a given series of hexadecimal bytes in ascending order. 7 M

   b) Write an 8086 assembly language program to add two 16-digit packed BCD numbers.   **7 M**

3. a) Explain the static RAM and EPROM interfacing to 8086 microprocessor.   6 M

b) Explain the need of DMA. Discuss about DMA data transfer and interfacing of 8237.   8 M

4. a) Explain the control word format of 8255 in I/O and BSR mode.   7 M

   b) Explain the interfacing of stepper motor to 8086 microprocessor.   7 M

5. a) Explain the various hardware and software interrupts in 8086 microprocessor.   5 M

   b) With the help of the internal block diagram, explain the working of 8259 priority interrupt controller.   9 M

6. a) Give an overview of RS-232C serial data standard.   5 M

   b) Explain the architecture of 8251 USART with the help of a diagram.   9 M

7.   Explain the architecture of Intel 80386 CPU with the help of a block diagram.   14 M

8. a) What are the salient features of a Pentium machine?   6 M

   b) What are the architectural differences between 80486 and Pentium processor.   8 M