Code: R7221504

R07

B.Tech II Year II Semester (R07) Supplementary Examinations, April/May 2013
MICROPROCESSORS AND INTERFACING
(Computer Science and Systems Engineering)

Time: 3 hours   Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks
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1   (a)   Draw and explain the internal architecture block diagram of 8086 microprocessor.
    (b)   Give the format of flag register in 8086 microprocessor. Also explain how conditional flags get set /reset.

2   (a)   Explain any four assembler directives with examples.
    (b)   Write an ALP to convert four digit hexadecimal number into a decimal number.

3   (a)   Draw and discuss the read and write cycle timing diagram of 8086 in minimum mode.
    (b)   Explain in detail about the DMA data transfer method.

4   (a)   Write an ALP to rotate stepper motor 135^0 in clockwise direction and then 120^0 in anti-clockwise direction.
    (b)   Explain briefly how ADC is interfaced to the processor.

5   (a)   Explain about DOS and BIOS interrupts.
    (b)   With a block diagram, explain the operation of programmable interrupt controller 8259.

6   (a)   Explain about USART and how it is interfaced to the processor.
    (b)   Describe briefly about:
              (i)   RS‑232 serial interface
              (ii) IEEE‑488 GPIB standard

7   (a)   Explain the internal architecture of 80386 processor.
    (b)   Explain in detail memory management of Pentium processor.

8   (a)   With a neat architectural diagram, explain the operation of 8051 microcontroller.
    (b)   Explain the serial mode data communication structure in 8051 microcontroller.

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