Code: R7310504

R7

B.Tech III Year I Semester (R07) Supplementary Examinations, May 2013
MICROPROCESSORS AND INTERFACING
(Common to CSE, IT and ECC)

Time: 3 hours   Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
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1 (a) Draw the architectural diagram of an 8086 microprocessor and explain the functioning of each block.
   (b) Discus briefly about the hardware interrupts of 8085.

2 (a) Write an ALP to arrange a set of 8 bit numbers into descending order.
   (b) Write an ALP to count the number of 0's in a given 16 bit binary string.

3 (a) With an example explain how static RAMs are interfaced to 8086.
   (b) Explain the need for DMA. Discuss in detail about DMA data transfer method.

4 (a) With an example, explain the need for 8255 PPI in microprocessor based systems.
   (b) Draw the pin diagram of 8255 and explain about each pin.

5 (a) Describe the interrupt sequence in an 8086-8259A system.
   (b) Discuss briefly about DOS interrupts.

6 (a) Explain briefly about high-speed serial communication standards.
   (b) Write short notes on TXEMPTY signal and SYNC characters.

7 (a) Describe how the real mode operation of an 80386 is different from protected-mode operation.
   (b) Describe the following signal functions of 80386.
            (i) ADS #   (ii) READY #

8 (a) Discuss briefly about the instruction set of 8051.
   (b) What are the functions performed by the following 8051 pins:
            (i) RST   (ii) $\overline{EA}$

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