Code No: 56012

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
B. Tech III Year II Semester Examinations, May - 2015
MICROPROCESSORS AND MICROCONTROLLERS
(Common to EEE, ECE, EIE, ETM, ECM)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

1.a) Draw the internal architecture of 8086 microprocessor and explain its operation in detail.

   b) List out the different minimum mode and maximum mode signals and explain each pin in detail.

   [8+7]

2.a) Write an assemble language program to find the sorting of an array, the length of array is five 16-bit numbers.

   b) Define assembler directive and explain different assembler directives used in 8086 microprocessor.

   [8+7]

3.a) List out the various modes of operations of 8255 PPI and Draw the I/O mode frame format, explain it.

   b) Draw the detailed interfacing diagram of keyboard interfacing with 8086 microprocessor along with 8255 PPI and explain its operation.

   [8+7]

4.a) Draw the internal architecture of 8257 DMA controller and explain its operation of each block.

   b) Write short notes on interrupt service routine concept of 8086 microprocessor. [8+7]

5.a) Draw the internal architecture of 8251 USART and explain operation of each block in it

   b) Explain the serial data transfer schemes in communication interface along with examples.

   [8+7]

6.a) Define addressing mode and explain different addressing modes used in 8085 microcontroller.

   b) Draw the internal RAM and ROM memory organization of 8051 Microcontroller and explain its operation.

   [8+7]

7.a) List out the different external hard ware interrupt of 8051 microcontroller and explain its operation.

   b) Write short notes on timers and counters concept in 8051 microcontroller. [8+7]

8. Write short notes on following terms:
   a) RISC processor futures.
   b) I/O memory and EPROM memory concept in RISC processor.

   [8+7]

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