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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, May - 2016
MICROPROCESSORS AND MICROCONTROLLERS
(Common to EEE, ECE, EIE, ETM)

Time: 3 hours   Max. Marks: 75

Answer any five questions
All questions carry equal marks

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1.a) Draw the internal architecture of 8086 microprocessor and explain its operation.
  b) Explain the concept of physical address calculations of 8086 microprocessor with example.   [8+7]

2.a) Define addressing mode and explain different addressing modes used in 8086 microprocessor with examples.
  b) Write an assembly language program to find the largest number in an array of 8-bit numbers.   [8+7]

3.a) Draw the A/D convertor interfacing with 8086 microprocessor and explain its operation.
  b) Explain the concept of key board and display interfacing along with circuit diagram.   [8+7]

4.a) Draw the internal architecture of 8259 and explain its operation.
  b) Draw the interrupt vector table and explain different interrupts presented in 8086 microprocessor.   [8+7]

5.a) Explain different serial communication methods used in 8251 USART.
  b) Draw the internal architecture of 8251 USART and explain its operation in detail.   [8+7]

6.a) Explain the important futures of 8051 microcontroller in detail.
  b) Explain the TCON and PSW registers operations in 8051 microcontroller.   [8+7]

7.a) Explain different hard ware and software interrupts used in 8051 microcontroller.
  b) Explain the logical instruction set of 8051 microcontroller with examples.   [8+7]

8. Write short notes on following terms:
   a) AVR family architecture
   b) UART.   [8+7]

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