



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

III Year – II Semester		L	T	P	C
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MICROPROCESSOR AND MICROCONTROLLERS LAB					

List of Experiments:

PART- A: (Minimum of 5 Experiments has to be performed) 8086 Assembly Language Programming and Interfacing

1. Programs for 16-bit arithmetic operations (using Various Addressing Modes).
 - a. Addition of n-BCD numbers.
 - b. Multiplication and Division operations.
2. Program for sorting an array.
3. Program for Factorial of given n-numbers.
4. Interfacing ADC to 8086
5. Interfacing DAC to 8086.
6. Interfacing stepper motor to 8086.

PART-B: (Minimum of 5 Experiments has to be performed) 8051 Assembly Language Programming and Interfacing

1. Finding number of 1's and number of 0's in a given 8-bit number
2. Average of n-numbers.
3. Program and verify Timer/ Counter in 8051.
4. Interfacing Traffic Light Controller to 8051.
5. UART operation in 8051
6. Interfacing LCD to 8051.

PART-C (Minimum of 2 Experiments has to be performed) Conduct the following experiments using ARM CORTEX M3 PROCESSOR USING KEIL MDK ARM

1. Write an assembly program to multiply of 2 16-bit binary numbers.
2. Write an assembly program to find the sum of first 10 integers numbers.
3. Write a program to toggle LED every second using timer interrupt.

Equipment Required:

1. Regulated Power supplies
2. Analog/Digital Storage Oscilloscopes
3. 8086 Microprocessor kits
4. 8051 microcontroller kits
5. ADC module, DAC module
6. Stepper motor module
7. Key board module
8. LED, 7-Segment Units
9. Digital Multi-meters
10. ROM/RAM Interface module
11. Bread Board etc.
12. ARM CORTEX M3
13. KEIL MDK ARM, Digital Multi-meters