

VIDYA JYOTHI INSTITUTE OF TECHNOLOGY HYDERABAD

III Year B.Tech. ECE II-Sem

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Microprocessors and Microcontrollers Lab

Course Outcomes:

A14485	Course Outcomes
1	To Understand and implement the basic programs of microprocessor (8086)
2	To analyze and interpret the interfacing concept of microprocessor (8086) with other Processors
3	To illustrate and show the different programs using Microcontroller (8051)
4	To implement and verify the interfacing concepts with 8051 microcontroller



List of Experiments : (Minimum 12 Experiments have to be conducted)

The following programs/experiments are written for assembler and execute the same with 8086 and 8051 kits

1. Programs for 16 bit arithmetic operations for 8086 (using various addressing modes)
2. Program for sorting an array for 8086
3. Program for searching for a number or character in a string for 8086
4. Program for String manipulations for 8086
5. Program for digital clock design using 8086.
6. Interfacing ADC and DAC to 8086
7. Parallel communication between two microprocessors using 8255.

8. Serial communication between two microprocessor kits using 8251.
9. Interfacing to 8086 and programming to control stepper motor.
10. Programming using arithmetic, logical and bit manipulation instructions of 8051
11. Program and verify Timer/Counter in 8051.
12. Program and verify interrupt handling in 8051.
13. UART operation in 8051.
14. Communication between 8051 kit and PC.
15. Data transfer from peripheral to memory through DMA controller 8237/8257

Equipment:

Stand Alone 8086 Microprocessor Trainer Kit	12
Computers	30
MASM Software	30
Keil μ Vision Software	30
Stepper Motor Interface	2
8-bit 8 Channel A/D Interface Module	2
Dual DAC Interface	2
8255 Study Card	2
8251 USART Interface	2
8279 Keyboard Display Interface	2
8257 DMA Controller	2
8051 Microcontroller Trainer SDA - 51MB	12