FUTURE INSTITUTE OF ENGINEERING AND MANAGEMENT

Department of Electrical Engineering

Microprocessor and Microcontroller Laboratory

Description: The Microprocessor and Microcontroller Laboratory is equipped with 8085 microprocessor and 8051 microcontroller which are mainly covered in the B. Tech Curriculum. Through hands on experiment with real components & equipments, students can gain practical exposure. Microprocessor Lab is also well equipped with computers and proper power supplies to all computers through inverters. The students are developing prototype projects using our.

Major facilities/equipments	: 8085 Microprocessor and 8051 Microcontroller
Faculty In-Charge	: Mr.Dipayan Nath, M.E., Assistant Professor
Technician	: Mr.Shuvomoy Sharma, AMIE
Area	: 73.81 sq.m
No. of experiments	: 13
Courses conducted	: Microprocessor and Microcontroller Laboratory
Exclusive / Shared	: Exclusive

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List of Major Equipment

Sl. No.	Major equipment	Quantity
1	8085 Microprocessor Trainer Kit	5
2	Universal Trainer kit for 8051 microcontroller.	5
3	Computer	19
4	8051 Test Board	4
5	Digital Multimeter	6
6	6 Volt Relay	3
7	Analog to Digital Converter	3
8	D.C Regulated power supply.	2
9	8085 simulator	20

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List of Experiments as per Syllabus

Sl. No.	Name of The Experiments
1	Familiarization with 8085 register level architecture
2	Study of prewritten program on trainer kit using the basic instruction set (data transfer, load/store, arithmetic, logical) and assignment.
3	Familiarization with 8085 simulator on PC, Study of prewritten program using basic instruction set, assignment.
4	Programming using kit/simulator: Copying a block of data.
5	Programming using kit/simulator : Shifting a block of memory
6	Programming using kit/simulator : Packing and unpacking of BCD numbers
7	Programming using kit/simulator : Addition of BCD number
8	Programming using kit/simulator: Binary to ASCII conversion.
9	Program using subroutine calls and using IN/OUT instruction using 8255 PPI on the trainer kit.
10	Interfacing with I/O module ADC
11	Study of 8051 Micro controller kit
12	Writing program for the following task using the 8051 kit basic arithmetic and logical operation.
13	Writing program for the following task using the 8051 kit interfacing of keyboard and stepper motor.

List of Experiments beyond the Syllabus

Sl. No.	Name of The Experiments
1	8085 program for bubble sort using simulator and kit.
2	Interfacing Relay with 8085 microprocessor kit.