Microprocessors & Microcontrollers
Code: EC502
Contact: 3L + 1T
Credits: 4

Introduction to Microcomputer based system. History of evolution of Microprocessor and Microcontrollers and their advantages and disadvantages.   [1L]

Architecture of 8085 Microprocessor. Address/data bus demultiplexeing, status Signals and the control signal generation. Instruction set of 8085 microprocessor, Classification of instruction, addressing modes, timing diagram of the instructions (a few examples).   [7L]

Assembly language programming with examples, Interrupts of 8085 processor, programming using interrupts. [5L]

Serial and parallel data transfer – programmed I/O, interrupts driven I/O, DMA, asynchronous and synchronous serial transmission using SID and SOD pins of 8085 processor.   [2L]

Introduction to MCS-51 microcontroller –Architecture, pin details, memory organization, Hardwar features of MCS-51, external memory interfacing, timers, interrupts, power management, serial port, addressing modes, assembly language programming.   [5L]

THE 8086 microprocessor- Architecture, pin details, addressing modes, instruction set, Assembly language programming interrupts.   [3L]

Support IC chips- 8255, 8253, 8259, 8279 and 8251 and their interfacing with 8085, 8086 and microcontroller 8051.   [8L]

Keyboard and Multiplexed display, LCD interfacing, with 8085, 8086, and 8051.   [3L]

Memory interfacing with 8085, 8086, and 8051- ADC and DAC interfacing with the processor 8085, 8086 and 8051.   [2L]

Brief introduction to PIC microcontroller (16F877)   [1L]