**13EC3201-MICROPROCESSORS AND INTERFACING**

**(Common to EEE, ECE, CSE)**

**Lectures/Week:4Hrs Credits:4 Sessional Marks:40**

**End Exam Durastion:3Hrs End Exam.Marks:60**

**UNIT-I**

Introduction to microprocessors, Evaluation of Microprocessors, Types of microprocessors, Architecture of 8085 microprocessor, pin configuration, Instruction Cycle, Timing Diagrams, Stack and Subroutines.

**UNIT-II**

Instruction Set of 8085 microprocessor, Addressing modes, Assembly Language Programs(8085) for addition, subtraction, multiplication, division etc., Interrupts of 8085, Memory and I/O interfacing of 8085 microprocessor.

**UNIT-III**

Architecture of 8086 microprocessor, Instruction set, Addressing modes, Interrupt system. Minimum mode and Maximum mode operations of 8086 and its timing diagrams, Assembler directives, Assembly language programs (8086), Stages of software development.

**UNIT- IV**

Data transfer schemes-synchronous, Asynchronous, Interrupt driven and DMA type schemes, Programmable interrupt controller (8259) and its interfacing, Programmable DMA controller (8257) and its interfacing, Programmable Interval Timer (8253) and its interfacing, Programmable communication Interface(8251 USART) and its interfacing.

**UNIT-V**

Memory interfacing to 8086-Interfacing various types of RAM and ROM chips, PPI (8255) and its interfacing, ADC and DAC Interfacing, Waveform generation, Traffic light controller, Stepper motor control, temperature measurement and control.

**TEXT BOOKS:**

1. Ram . B,” Fundamentals of Microprocessors and Micro controllers” , Dhanpat Rai publications.
2. Douglas V. Hall, “ Microprocessors and interfacing: Programming and hard ware”, TMH, 2nd edition.

**REFERENCE BOOKS:**

1. A.K. Ray and K.M. Bhurchandi, “ Advanced Microprocessors and Peripherals”, TMH.
2. “Microprocessor Architecture, Programming, and Applications with the 8085” by [Ramesh S. Gaonkar](http://www.goodreads.com/author/show/1283958.Ramesh_S_Gaonkar)”, Prentice Hall PTR