CS2201 MICROPROCESSORS

Course Objectives:

- To discuss the architectures of 8085, 8086 microprocessors, their instruction sets and related ALP programs.
- To discuss interfacing semiconductor memories, interfacing peripheral to Intel 8086.
- To study interfacing data converters to 8086 and discuss about micro controller 8051 architecture.

Course Outcomes:

- Understand the basic architectures of 8085 and 8086 microprocessors.
- Ability to write ALP programs using instruction sets.
- Understand the various interfacing concepts and micro controllers.

SYLLABUS

Introduction to Microprocessors and Microcomputers: A Brief Architecture and Programming of 8085Microprocessor.

Architecture: Instruction Set and Programming of 8086Microprocessor

Interfacing Semiconductor Memories and I/O Devices: Semiconductor Memories: Classification Internal Organization& Functional Description, Interfacing SRAMs and EPROMs to8086, Interfacing Characteristics of I/Devices, I/O Device addressing methods, I/O Device Programming Methods.

Interfacing Peripherals to Intel8086 -1: Parallel I/O Interface- 8255, Serial I/O Interface – 8251, Timer Interface -8253/8254

Interfacing Peripheral to Intel 8086 - 2: Keyboard / Display Interface – 8279, Interrupt Controller Interface – 8259

Interfacing Data Converters to 8086: D/A Conversion Methods, A/D Conversion methods, Interfacing DAC, Interfacing ADC.

Introduction to Micro controllers: Intel 8051Architecture and Programming

Text Books:

1. Microprocessor Architecture, Programming, and Applications with the 8085 Ramesh S.Gaonkar, 4thEdition, PenramInternational,1999
2. The 80x86 Family, Design, Programming and Interfacing, John E.Uffenbeck, 3rdEdition,Pearson Education Inc.,2002
3. KennethJ.Ayala, 8051 Microcontroller Architecture, Programming And Applications, 2ndEdition, Penram InternationalPublications,1999

Reference Books:

1. BARRYB.BREY, The Intel Microprocessors 8086 / 8088, 80186 / 80188, 80286, 80386 and 80486, Pentium, Pentium Pro Processor, Pentium II, Pentium III, Pentium4, Architecture, Programming and Interfacing, 8th Edition, Pearson Education Inc.,2009
2. Walter A. Tribeland, Avtar Singh, The 8088 and 8086 Microprocessors, Programming, interfacing, Software, Hardware, and Applications, 4thEdition, Pearson Education Inc.,20033. Microprocessors and Interfacing, Programming and Hardware, 2ndEdition, Douglass V. Hall, TMH Edition,1999
3. Sanjay K Bose, Hardware and Software of Personal Computers, New Age International (P)Ltd.,1991 Myke Predko, Programming and Customizing the 8051 Microcontroller, TMH,1999