SYLLABUS

CS010405: Microprocessor Systems

Teaching scheme Credits: 4

Module I (10 hours)

Architecture of 8085 – Registers. Instruction set of 8085 - Instruction Types – Arithmetic – Logic data transfer, Branch, Stack, I/O and Machine Control instructions - Addressing Modes - Direct and Indirect Addressing - Immediate Addressing - Implicit Addressing.

Module II (12 hours)

Subroutines - Stack Operations - Call Return sequence- Programming Examples. Timing and control unit – The fetch operation – Machine cycle and T- State instruction and data flow. Address space partitioning - Memory mapped I/O - I/O mapped I/O.

Module III (14 hours)

Interrupts of 8085 - Hardware & Software Interrupts – Enabling, Disabling and masking of interrupts – Polling – HALT & HOLD states – Programmable interrupt controller – 8259.

Module IV (12 hours)

Data transfer schemes - Programmed data transfer - synchronous and asynchronous transfer - interrupt driven data transfer – DMA data transfer. Study of Interfacing ICs – 8257,8255 programmable peripheral interface (compare it with 8155).

Module V (12 hours)

Programmable interval timer 8253, 8251 -,Interfacing Keyboard and display devices, Hardware and Software approach – USART 8251. (interfacing chips functions and internal block diagram only).