

Class Day	Theory Topics
1st	Introduction to Microprocessor (8 bit - 8085)
2nd	Introduction to Microcomputer
3rd	Distinguish between Microprocessor & Microcomputer
4th	Concept of address bus, data bus
5th	Concept of control bus and system bus
1st	General bus structure Block diagram
2nd	Basic Architecture of 8085 (8 bit microprocessor)
3rd	Signal description (pin diagram) of 8085 microprocessor
4th	Register organizations.
5th	Distinguish between SPR & GPR
1st	Timing & Control Module
2nd	Stack, stack pointer & stack top
3rd	Interrupts - 8085 interrupts
4th	Masking of interrupt (SIM)
5th	Masking of interrupt (RIM)

Class Day	Theory Topics
1st	Addressing data & differentiate between one byte, two byte & three byte
2nd	Addressing modes in instructions with examples
3rd	Instruction set of 8085 (Data transfer)
4th	Arithmetic, Logical, Branching, Stack & I/O, Machine control
5th	Simple Assembly Language Programming of 8085
1st	Simple Addition & Subtraction
2nd	Logic operations (AND, OR, Complement 1's & 2's) & Masking of bits
3rd	Counters & Time delay (Single Register, Register pair, More than two registers)
4th	Looping, Counting & Indexing (Call/JMP etc)
5th	Stack & Subroutines programmes
1st	Code conversion, BCD Arithmetic & 16 bits data operation.
2nd	Block transfer, compare between two numbers
3rd	Array finding (Largest number)
4th	Array finding (Smallest number)
5th	Memory & I/O Addressing

Class Day	Theory Topics
1st	Define opcode, operand, T. State Fetch cycle, machine cycle
2nd	Instruction cycle & discuss the concept of timing diagram
3rd	Draw timing diagram for memory read
4th	Draw timing diagram for memory write
5th	I/O read, I/O write machine cycle
1st	Draw a neat sketch for the timing diagram for 8085
2nd	MOV, MVI, LDA instruction
3rd	Concept of interfacing
4th	Define mapping & data transfer mechanisms
5th	Memory mapping & I/O mapping
1st	Concept of memory interfacing
2nd	Concept of address decoding for I/O devices
3rd	Programmable peripheral interface - 8255
4th	ADC & DAC with interfacing
5th	Interfacing seven segment Displays

Class Day	Theory Topics
1st	Generate square waves on all lines of 8255
2nd	Design interface a traffic light control system using 8255
3rd	Design interface to stepper motor control using 8255
4th	Register organization of 8086
5th	Internal architecture of 8086
1st	Signal description of 8086
2nd	General BUS operation
3rd	Physical memory organization
4th	Minimum mode X Timings
5th	Maximum mode X Timings
1st	Interrupts and interrupt service routines, interrupt cycle
2nd	Non-maskable interrupt
3rd	Maskable interrupt, 8086 instructions
4th	8086 instruction set X programming
5th	Simple assembly language programming using 8086 instruction

Class Day	Theory Topics
1st	Distinguish Between Microprocessor & Microcontroller
2nd	8 bit & 16 bit Microcontroller
3rd	CISC & RISC processor
4th	Architecture of 8051 Microcontroller
5th	Signal description of 8051 Microcontroller
1st	Memory organization
2nd	Registers, Timers, Interrupts of 8051 Microcontroller
3rd	Addressing modes of 8051
4th	Simple 8081 Assembly language.
5th	Arithmetic & Logic instructions, JUMP, LOOP, CALL instructions
1st	I/O port programming
2nd	Interrupts, Timers & Counters
3rd	Serial communication
4th	Microprocessor & Microcontroller Interrupts
5th	Interfacing to 8255