



SYNERGY SCHOOL OF ENGINEERING
DEPARTMENT OF ELECTRICAL ENGINEERING

Discipline: Computer science Engineering	Semester: - 4 th Sem CSE	Name of the teaching faculty: - PRAJNAPARAMITA KABI
Subject: - microprocessor and microcontroller	No. of Days/week class Allotted: -3	No. of weeks: -15 SESSION-2025-2026 SUMMER Starting date- 22/12/25 Closing date-
No. of week	No. of class	Topic to be Taught
1	1 ST	Evolution of Microprocessors,
	2 ND	Specific features of Microprocessors,
	3 RD	Application in our daily life (a few examples) used in microprocessor
2	1 ST	Internal architecture of 8085 microprocessor
	2 ND	Explanation of each block in brief in microprocessor
	3 RD	Concept of bus structure of microprocessor
3	1 ST	Description of Register-to-register transfer of a microprocessor
	2 ND	Communication with I/O and memory (This part can be explained using the specific microprocessors like 8085 or 8086/8088).
	3 RD	Pin details of 8085 and 8086/8088 CPU and them functions in brief
4	1 ST	Different addressing mode of 8085 microprocessor
	2 ND	Explain different Instruction cycles of 8085 microprocessor
	3 RD	Types Instruction set of microprocessors
5	1 ST	Timing diagram (may be limited to 8085 and 8086/8088 CPU). Concept of assemblers and compilers
	2 ND	Concept of address space, address/data bus demultiplexing,
	3 RD	Address and data bus buffering, address decoding
6	1 ST	Interfacing of I/O concepts,
	2 ND	Memory interfacing concept of I/O mapped I/O and memory mapped
	3 RD	Interrupts - Types of interrupts, Hardware and software data transfer schemes - Synchronous, asynchronous and interrupt driven
7	1 ST	Assembly language programming using 8085 microprocessors
	2 ND	Example for register to register, register to memory, memory to register, block of data movement from one area of memory to another
	3 RD	Merging of two blocks of data, data block exchange.

8	1 ST	Examples of arithmetic addition, subtraction using 8085 microprocessors
	2 ND	Programming of multiplication and division using 8085 microprocessors
	3 RD	Examples of searching and sorting (simple)
9	1 ST	Examples using of look up tables
	2 ND	Use subroutines and delay programme
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10	1 ST	Assembly language programming of microprocessor
	2 ND	Functional description of 8255, 8253, 8251,
	3 RD	Functional description of 8257, 8237 and 8259.
11	1 ST	Peripheral chip and their interfacing
	2 ND	Interfacing of these chips with some standard CPU
	3 RD	Simple assembly language programme to explain the function of these chips.
12	1 ST	Simple assembly language programme to explain the function of these chips.
	2 ND	Special purpose of interfacing device like Keyboard interfacing,
	3 RD	Special purpose of 7 segment and dot matrix display interfacing.
13	1 ST	Purpose of A/D and D/A interfacing
	2 ND	Stepper motor interfacing
	3 RD	Introduction to 8051 Microcontroller
14	1 ST	Architecture of 8051 microcontroller
	2 ND	Pin diagram of 8051 microcontroller b
	3 RD	8051 Instruction Set and Programming
15	1 ST	8051 Instruction Set, bus structure and Programming
	2 ND	Hardware features of 8051
	3 RD	Example of 8051 Interface

Pragnaparamita Rani
Signature of the faculty 22/12/25

Pragnaparamita Rani
22/12/25
HOD EE