



GOVERNMENT POLYTECHNIC, BALASORE

Government of Odisha

ସରକାରୀ ବହୁବୃତ୍ତି ଅନୁଷ୍ଠାନ, ବାଲେଶ୍ଵର

ACADEMIC LESSON PLAN FOR SUMMER SEMESTER - 2026

DEPT. OF ELECTRONICS & TELECOMMUNICATION, GOVT. POLYTECHNIC, BALASORE

NAME OF THE FACULTY: ER. LIPIKA SANDHA (LECT. STAGE -I, E & TC)

TH3: - Microprocessors and Microcontroller

DISCIPLINE: ELECTRONICS & TELECOMMUNICATION ENGINEERING	SEMESTER: 3 RD	NAME OF THE TEACHING FACULTY: ER. LIPIKA SANDHA (LECT. STAGE -I)
SUBJECT: TH3: Microprocessors and Microcontroller	NO. OF DAYS/PER WEEK CLASS ALLOTTED: 3	SEMESTER FROM DATE: 22 ND , December 2025 NO. OF WEEKS: 15
WEEK	CLASS DAY	THEORY TOPICS
1 ST	1 ST	I Architecture of 8085 Microprocessor Functional Block Diagram
	2 ND	Registers
	3 RD	ALU, Bus systems
2 ND	1 ST	Timing and control signals
	2 ND	Machine cycles and timing diagrams
	3 RD	Machine cycles and timing diagrams
3 RD	1 ST	II Programming of 8085 Instruction formats,
	2 ND	addressing modes,
	3 RD	Instruction set,
4 TH	1 ST	Instruction set,
	2 ND	Needs for Assembly language – Development of Assembly language programmes.
	3 RD	Need for Assembly language – Development of Assembly language programmes. Need
5 TH	1 ST	Need for Assembly language – Development of Assembly language programmes.
	2 ND	Need for Assembly language – Development of Assembly language programmes.
	3 RD	III Memory Interfacing Interface requirements
6 TH	1 ST	Address space partitioning.
	2 ND	Buffering of Buses timing constraints,
	3 RD	Memory control signals
7 TH	1 ST	Read and write cycles
	2 ND	Interfacing SRAM, EPROM and DRAM sections
	3 RD	IV I/O Interfacing Memory mapped I/O Scheme – I/O mapped I/O scheme.
8 TH	1 ST	Input and Output cycles – Simple I/O ports

	2 ND	Programmable peripheral interface (8255).
	3 RD	Data transfer schemes: Programmable data transfer, DMA data transfer
9 TH	1 ST	Synchronous, Asynchronous and interrupt driven data transfer schemes
	2 ND	Interfacing – Simple keyboards and LED displays.
	3 RD	DMA controller 8237
10 TH	1 ST	V Applications Interfacing of A/D converters (ADC 0800/ADC 0808/ADC 0809)
	2 ND	Waveform generators
	3 RD	Multiplexed seven segment LED display systems
11 TH	1 ST	Measurement of frequency, phase angle and power factor
	2 ND	Traffic light controller
	3 RD	Stepper motor Control
12 TH	1 ST	VI Intel 8051 Microcontroller Architecture of 8051.
	2 ND	Memory Organization
	3 RD	Addressing modes
13 TH	1 ST	Instruction set
	2 ND	Instruction set
	3 RD	Boolean processing – Simple programmes
14 th	1 ST	VII 8051 Peripheral Functions 8051 interrupt structures
	2 ND	Timer and serial functions
	3 RD	parallel port features : Modes of operation
15 TH	1 ST	Power control, features – Interfacing of 8051
	2 ND	Typical applications – MCS 51 family features 8031/8051/8751.
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20/12/2025
Faculty


H.O.D 20/12/25