

LESSON PLAN FOR SESSION: 2026-27

DISCIPLINE		SEMESTER	NAME OF THE TEACHING FACULTY	
ELECTRICAL ENGG.		5TH	MRS SOUMYASREE KALYANI PANDA ,LECT(ETC)	
SUBJECT: DE &MP LAB		NO. OF DAYS PER WEEK CLASS ALLOTTED : 02	SEMESTER FROM 01/07/2026 TO 05/11/2026	
			NO. OF WEEKS : 15 NOS.	
WEEKS	CLASS DAYS	THEORY TOPICS		
1ST WEEK	1ST	Verify truth tables of AND, OR, NOT, NOR, NAND, XOR, XNOR gates.		
		Verify truth tables of AND, OR, NOT, NOR, NAND, XOR, XNOR gates.		
	2ND	Implement various gates by using universal properties of NAND & NOR gates and verify truth table		
2NDWEEK	1ST	Implement various gates by using universal properties of NAND & NOR gates and verify truth table		
	2ND	Implement half adder and Full adder using logic gates		
3RDWEEK	1ST	Implement half subtractor and Full subtractor using logic gates.		
		Implement half subtractor and Full subtractor using logic gates.		
	2ND	Implement a 4-bit Binary to Gray code converter.		
4THWEEK	1ST	Implement a 4-bit Binary to Gray code converter.		
		Implement a Single bit digital comparator		
	2ND	Implement a Single bit digital comparator		
5THWEEK	1ST	Study Multiplexer and demultiplexer.		
		Study Multiplexer and demultiplexer.		
	2ND	Study of SR flip-flop		
6THWEEK	1ST	Study of SR flip-flop		
		Study of JK flip-flop		
	2ND	Study of JK flip-flop		
7THWEEK	1ST	Study of D flip-flop		
		Study of D flip-flop		
	2ND	Study of T flip-flop		
8TH WEEK	1ST	Study of T flip-flop		
		Realize a 4-bit asynchronous UP/Down counter with a control for up/down counting		
	2ND	Realize a 4-bit asynchronous UP/Down counter with a control for up/down counting		
9TH WEEK	1ST	Realize a 4-bit synchronous UP/Down counter with a control for up/down counting.		
		Realize a 4-bit synchronous UP/Down counter with a control for up/down counting.		
	2ND	Implement Mode-10 asynchronous counters.		
10TH WEEK	1ST	Implement Mode-10 asynchronous counters.		
		Study shift registers		
	2ND	Study shift registers		
11TH WEEK	1ST	Study shift registers		
		General Programming using 8085A development board of 1'S Complement		
	2ND	General Programming using 8085A development board of 2'S Complement		
12TH WEEK	1ST	Addition of 8-bit number		
		Subtraction of 8-bit number resulting 8/16 bit number.		
	2ND	Decimal Addition 8-bit number		
13TH WEEK	1ST	Decimal Subtraction 8-bit number		
		Compare between two numbers		
	2ND	. Find the largest in an Array		
14TH WEEK	1ST	Block Transfer.		
		Block Transfer.		
	2ND	Traffic light control using 8255		
5TH WEEK	1ST	Traffic light control using 8256		
		Generation of square wave using 8255		
	2ND	Generation of square wave using 8255		



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DISCIPLINE		SEMESTER	NAME OF THE TEACHING FACULTY	
ELECTRICAL ENGG.		5th	MRS SOUMYASREE KALYANI PANDA ,LECT(ETC)	
SUBJECT: DIGITAL ELECTRONICS & MICROPROCESSOR		NO. OF DAYS PER WEEK CLASS ALLOTTED : 03		SEMESTER FROM 01/07/2026 TO 05/11/2026
WEEKS		CLASS DAYS		NO. OF WEEKS : 15 NOS.
		THEORY TOPICS		
1ST WEEK	1ST	Binary, Octal, Hexadecimal number systems and compare with Decimal system		
	2ND	Binary addition, subtraction, Multiplication and Division		
	3RD	1's complement and 2's complement numbers for a binary number		
	4TH	Subtraction of binary numbers in 2's complement method.		
	5TH	Use of weighted and Un-weighted codes & write Binary equivalent number		
2ND WEEK	1ST	Use of weighted and Un-weighted codes & write Binary equivalent number		
	2ND	Importance of parity Bit		
	3RD	Logic Gates: AND, OR, NOT, NAND, NOR and EX-OR gates with truth table		
	4TH	Realize AND, OR, NOT operations using NAND, NOR gates.		
	5TH	Realize AND, OR, NOT operations using NAND, NOR gates.		
3RD WEEK	1ST	Different postulates and De-Morgan's theorems in Boolean algebra.		
	2ND	Use Of Boolean Algebra For Simplification Of Logic Expression		
	3RD	Use Of Boolean Algebra For Simplification Of Logic Expression		
	4TH	Karnaugh Map For 2,3,4 Variable, Simplification Of SOP And POS Logic Expression		
	5TH	Karnaugh Map For 2,3,4 Variable, Simplification Of SOP And POS Logic Expression		
4TH WEEK	1ST	Give the concept of combinational logic circuits		
	2ND	Half adder circuit and verify its functionality using truth table		
	3RD	Realize a Half-adder using NAND gates only and NOR gates only		
	4TH	Full adder circuit and explain its operation with truth table.		
	5TH	Full adder circuit and explain its operation with truth table.		
5TH WEEK	1ST	Realize full-adder using two Half-adders and an OR – gate and write truth table		
	2ND	Realize full-adder using two Half-adders and an OR – gate and write truth table		
	3RD	Full subtractor circuit and explain its operation with truth table.		
	4TH	Full subtractor circuit and explain its operation with truth table.		
	5TH	Operation of 4 X 1 Multiplexers and 1 X 4 demultiplexer		
6TH WEEK	1ST	Operation of 4 X 1 Multiplexers and 1 X 4 demultiplexer		
	2ND	Working of Binary-Decimal Encoder & 3 X 8 Decoder		
	3RD	Working of Binary-Decimal Encoder & 3 X 8 Decoder		
	4TH	Working of Two bit magnitude comparator.		
	5TH	Working of Two bit magnitude comparator.		
7TH WEEK	1ST	Give the idea of Sequential logic circuits.		
	2ND	State the necessity of clock and give the concept of level clocking and edge triggering.		
	3RD	Clocked SR flip flop with preset and clear inputs		
	4TH	Construct level clocked JK flip flop using S-R flip-flop and explain with truth table		
	5TH	Concept of race around condition and study of master slave JK flip flop		
8TH WEEK	1ST	Give the truth tables of edge triggered D and T flip flops and draw their symbols.		
	2ND	Applications of flip flops.		
	3RD	Define modulus of a counter		
	4TH	4-bit asynchronous counter and its timing diagram.		
	5TH	Asynchronous decade counter.		
9TH WEEK	1ST	4-bit synchronous counter.		
	2ND	Distinguish between synchronous and asynchronous counters		
	3RD	State the need for a Register and list the four types of registers.		
	4TH	Working of SISO, SIPO, PISO, PIPO Register with truth table using flip flop.		
	5TH	Working of SISO, SIPO, PISO, PIPO Register with truth table using flip flop.		
10TH WEEK	1ST	Introduction to Microprocessors, Microcomputers		
	2ND	Architecture of Intel 8085A Microprocessor and description of each block.		
	3RD	Architecture of Intel 8085A Microprocessor and description of each block.		
	4TH	Pin diagram and description.		
	5TH	Pin diagram and description.		
11TH WEEK	1ST	Stack, Stack pointer & stack top		
	2ND	Interrupts		
	3RD	Opcode & Operand		

	4TH	Differentiate between one byte, two byte & three byte instruction with example
	5TH	Instruction set of 8085 example
12TH WEEK	1ST	Addressing mode
	2ND	Fetch Cycle, Machine Cycle, Instruction Cycle, T-State
	3RD	Fetch Cycle, Machine Cycle, Instruction Cycle, T-State
	4TH	Timing Diagram for memory read, memory write, I/O read, I/O write
	5TH	Timing Diagram for memory read, memory write, I/O read, I/O write
13TH WEEK	1ST	Timing Diagram for 8085 instruction
	2ND	Timing Diagram for 8085 instruction
	3RD	Counter and time delay
	4TH	Simple assembly language programming of 8085
	5TH	Simple assembly language programming of 8085
14TH WEEK	1ST	Basic Interfacing Concepts, Memory mapping & I/O mapping
	2ND	Basic Interfacing Concepts, Memory mapping & I/O mapping
	3RD	Basic Interfacing Concepts, Memory mapping & I/O mapping
	4TH	Functional block diagram and description of each block of Programmable peripheral
	5TH	Functional block diagram and description of each block of Programmable peripheral
15TH WEEK	1ST	Functional block diagram and description of each block of Programmable peripheral
	2ND	Application using 8255: Seven segment LED display, Square wave generator, Traffic light
	3RD	Application using 8255: Seven segment LED display, Square wave generator, Traffic light
	4TH	Application using 8255: Seven segment LED display, Square wave generator, Traffic light
	5TH	Application using 8255: Seven segment LED display, Square wave generator, Traffic light



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<u>LESSON PLAN FOR SESSION:2026-27</u>			
DISCIPLINE		SEMESTER	NAME OF THE TEACHING FACULTY
ETC ENGG.		3RD	MRS,SOUMYASREE KALYANI PANDA,LECT(E&TC)
SUBJECT: ELECTRONICS MEASUREMENT & INSTRUMENTATION LABORATORY		NO. OF DAYS PER WEEK CLASS ALLOTTED : 02	SEMESTER FROM 01/07/2026 TO 05/11/2026
			NO. OF WEEKS : 15 NOS.
WEEKS	CLASS DAYS	THEORY TOPICS	
1ST WEEK	1ST	Study and construction of moving coil and moving iron instruments & calibrate	
		Study and construction of moving coil and moving iron instruments & calibrate	
	2ND	Study and construction of moving coil and moving iron instruments & calibrate	
		Study and construction of moving coil and moving iron instruments & calibrate	
2ND WEEK	1ST	Study and construction of moving coil and moving iron instruments & calibrate	
		Study and construction of moving coil and moving iron instruments & calibrate	
	2ND	Study and construction of moving coil and moving iron instruments & calibrate	
		Study and construction of moving coil and moving iron instruments & calibrate	
3RD WEEK	1ST	Study of static and dynamic characteristic of PMMC & moving iron instruments	
		Study of static and dynamic characteristic of PMMC & moving iron instruments	
	2ND	Study of static and dynamic characteristic of PMMC & moving iron instruments	
		Study of static and dynamic characteristic of PMMC & moving iron instruments	
4TH WEEK	1ST	Study of static and dynamic characteristic of PMMC & moving iron instruments	
		Study of static and dynamic characteristic of PMMC & moving iron instruments	
	2ND	Study of static and dynamic characteristic of PMMC & moving iron instruments	
		Study of static and dynamic characteristic of PMMC & moving iron instruments	
5TH WEEK	1ST	Study of Resolution and sensitivity of Digital Instrument	
		Study of Resolution and sensitivity of Digital Instrument	
	2ND	Study of Resolution and sensitivity of Digital Instrument	
		Study of Resolution and sensitivity of Digital Instrument	
6TH WEEK	1ST	Measurement of Current and Voltages by Low range ammeter and voltmeter respectively with shunt and	
		Measurement of Current and Voltages by Low range ammeter and voltmeter respectively with shunt and	
	2ND	Measurement of Current and Voltages by Low range ammeter and voltmeter respectively with shunt and	
		Measurement of Current and Voltages by Low range ammeter and voltmeter respectively with shunt and	
7TH WEEK	1ST	Measurement of Current and Voltages by Low range ammeter and voltmeter respectively with shunt and	
		Measurement of Current and Voltages by Low range ammeter and voltmeter respectively with shunt and	
	2ND	Measurement of Current and Voltages by Low range ammeter and voltmeter respectively with shunt and	
		Measurement of Current and Voltages by Low range ammeter and voltmeter respectively with shunt and	
8TH WEEK	1ST	Observe the wave forms of different frequency by using Function generator and draw its diagram measure	
		Observe the wave forms of different frequency by using Function generator and draw its diagram measure	
	2ND	Observe the wave forms of different frequency by using Function generator and draw its diagram measure	
		Observe the wave forms of different frequency by using Function generator and draw its diagram measure	
7TH WEEK	1ST	Observe the wave forms of different frequency by using Function generator and draw its diagram measure	
		Observe the wave forms of different frequency by using Function generator and draw its diagram measure	
	2ND	Observe the wave forms of different frequency by using Function generator and draw its diagram measure	
		Observe the wave forms of different frequency by using Function generator and draw its diagram measure	
9TH WEEK	1ST	Measure the unknown frequency and phase angle using CRO by Lissajous figure.	
		Measure the unknown frequency and phase angle using CRO by Lissajous figure.	
	2ND	Measure the unknown frequency and phase angle using CRO by Lissajous figure.	
		Measure the unknown frequency and phase angle using CRO by Lissajous figure.	
10TH WEEK	1ST	Measure the unknown frequency and phase angle using CRO by Lissajous figure.	
		Measure the unknown frequency and phase angle using CRO by Lissajous figure.	
	2ND	Measure the unknown frequency and phase angle using CRO by Lissajous figure.	
		Measure the unknown frequency and phase angle using CRO by Lissajous figure.	
11TH WEEK	1ST	Measurement of resistance using Wheatstone's Bridge	
		Measurement of resistance using Wheatstone's Bridge	
	2ND	Measurement of resistance using Wheatstone's Bridge	
		Measurement of resistance using Wheatstone's Bridge	
12TH WEEK	1ST	Measurement of resistance using Wheatstone's Bridge	
		Measurement of resistance using Wheatstone's Bridge	

12TH WEEK	2ND	Measurement of resistance using Wheatstone's Bridge
		Measurement of resistance using Wheatstone's Bridge
13TH WEEK	1ST	Measure the inductance by Maxwell's Bridge & Hay's Bridge
		Measure the inductance by Maxwell's Bridge & Hay's Bridge
	2ND	Measure the inductance by Maxwell's Bridge & Hay's Bridge
		Measure the inductance by Maxwell's Bridge & Hay's Bridge
14TH WEEK	1ST	Measure the inductance by Maxwell's Bridge & Hay's Bridge
		Measure the inductance by Maxwell's Bridge & Hay's Bridge
	2ND	Measure the inductance by Maxwell's Bridge & Hay's Bridge
		Measure the inductance by Maxwell's Bridge & Hay's Bridge
15TH WEEK	1ST	Practice the above experiments and submit the complete lab record and do viva voce.
		Practice the above experiments and submit the complete lab record and do viva voce.
	2ND	Practice the above experiments and submit the complete lab record and do viva voce.
		Practice the above experiments and submit the complete lab record and do viva voce.



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<u>LESSON PLAN FOR THE SESSION: 2026-27</u>			
DISCIPLINE		SEMESTER	NAME OF THE TEACHING FACULTY
E&TC Engg		3RD	SOUMYASREE KALYANI PANDA,LECT(ETC)
ELECTRONICS MEASUREMENT & INSTRUMENTATION		NO. OF DAYS PER WEEK CLASS ALLOTTED : 03	SEMESTER FROM 01/07/25 TO 05/11/26
			NO. OF WEEKS:- 15 NOS.
WEEKS	CLASS DAYS	THEORY TOPICS	
1ST WEEK	1ST	Discuss the Static Characteristics	
	2ND	Accuracy, sensitivity, reproducibility & static error of instruments	
	3RD	Dynamic characteristics & speed of instruments	
2ND WEEK	1ST	Errors of an instrument	
	2ND	Introduction to Indicating instruments and Types of indicating instruments	
	3RD	Basic operating principle of Indicating Instruments	
3RD WEEK	1ST	Working principle of permanent magnetic moving coil Instruments & Moving Iron Instrument	
	2ND	Basic principle of operation of DC Ammeter and Multirange Ammeter & AC Ammeter and	
	3RD	Basic principle of operation of DC Voltmeter & AC voltmeter and its applications	
4TH WEEK	1ST	Basic principle of OhmMeter (Series & Shunt type)	
	2ND	Basic principle of Analog Multimeter and its types & applications, Operation of Q meter and	
	3RD	Principle of operation of Ramp type Digital Voltmeter & applications	
5TH WEEK	1ST	Operation of display of Digital Multimeter & Resolution and Sensitivity	
	2ND	Basic Operating principle of Digital Multimeter, its types & applications	
	3RD	Basic Operating principle of Digital Frequency Meter	
6TH WEEK	1ST	DigitalMeasurement of Time & Measurement of Frequency	
	2ND	Operating principle of Digital Tachometer	
	3RD	LCR meter & its working principle	
7TH WEEK	1ST	Basic Operating principle of Oscilloscope & its Block Diagram	
	2ND	Basic Operating principle of Dual Trace Oscilloscope& its specification	
	3RD	CRO Measurements	
8TH WEEK	1ST	Lissajous figures	
	2ND	Applications of Oscilloscope in measurement of Voltage and frequency	
	3RD	Basic Operating principle of Digital Storage Oscilloscope	
9TH WEEK	1ST	Basic Operating principle of High frequency Oscilloscope	
	2ND	Types of Bridges (DC & AC Bridges) & Working principle of DC Bridges (Measurement of	
	3RD	Working principle of AC bridges (Measurement of inductance by Maxwell's Bridge & Hay's	
10TH WEEK	1ST	Measurement of capacitance by Schering's Bridge & DeSauty Bridge	
	2ND	Working principle of Q meter its circuit diagram& measurement of Low impedance	
	3RD	Measurement of frequency	
11TH WEEK	1ST	LCR Meter & its measurements	
	2ND	Define Transducer and Sensor, Type of Transducer & Parameters and advantages of	
	3RD	Working principle of Strain Gauges, Define Strain Gauge (No mathematical Derivation)	
12TH WEEK	1ST	Working principle of LVDT	
	2ND	Working principle of capacitive transducers (pressure) & LoadCell (Pressure Cell)	
	3RD	Working principle of Temperature Transducer (RTD, Optical Pyrometer, Thermocouple, and	
13TH WEEK	1ST	Working principle of Current transducer.	
	2ND	Working principle of Proximity & Light sensors.	
	3RD	General aspect & classification of Signal generators	
14TH WEEK	1ST	General aspect & classification of Signal generators	
	2ND	Working principle of AF Sine and Square wave generator	
	3RD	Working principle of the Function Generator	
15TH WEEK	1ST	Function of basic Wave Analyser and SpectrumAnalyser	
	2ND	Basic concept of Data Acquisition System(DAS)	
	3RD	Revision of the above topics	



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<u>LESSON PLAN FOR SESSION:2026-27</u>				
DISCIPLINE		SEMESTER	NAME OF THE TEACHING FACULTY	
ETC ENGG.		3RD	MRS SOUMYASREE KALYANI PANDA,LECT(E&TC)	
<u>SUBJECT:</u> Leadership Management Skill (TH-5)		NO. OF DAYS PER WEEK CLASS ALLOTTED : 03		SEMESTER FROM 01/07/2026 TO 05/11/2026
				NO. OF WEEKS : 15 NOS.
WEEKS	CLASS DAYS	UNITS	THEORY TOPICS	
1ST WEEK	1ST	UNIT-1: Leadership & Management, concept, principles	Definition of leadership, management	
	2ND		Leadership theories	
	3RD		Leadership characteristics	
2ND WEEK	1ST		Leadership characteristics	
	2ND		Principles of management	
	3RD		Principles of management	
3RD WEEK	1ST		Managerial functions	
	2ND		Leader v/s Manager, Leader/Manager traits and character	
	3RD		Leader v/s Manager, Leader/Manager traits and character	
4TH WEEK	1ST	UNIT-2: Human Resource Management in Organizations	Discussion of assigned topics in class on leadership and management principles and theories	
	2ND		Human Resource Management: Meaning, Nature, Objectives, Scope	
	3RD		Human Resource Management: Meaning, Nature, Objectives, Scope	
5TH WEEK	1ST		Human Resource Management: Meaning, Nature, Objectives, Scope	
	2ND		Job & Job analysis	
	3RD		Job & Job analysis	
6TH WEEK	1ST		Staff Development: Need and Objectives of Staff Development, Approaches	
	2ND		Staff Development: Need and Objectives of Staff Development, Approaches	
	3RD		Training & development	
7TH WEEK	1ST		Organizational Development: Components of OD process & Learning organization	
	2ND		Organizational Development: Components of OD process & Learning organization	
	3RD		Self-awareness	
8TH WEEK	1ST	UNIT-3:Personal disposition, skills & abilities of leader	Leadership characteristics, traits	
	2ND		Leadership skills & abilities	
	3RD		Emotional intelligence & its components, importance in leadership	
9TH WEEK	1ST		Communication skills for effective leadership, barriers to effective communication, Active Listening, Mindful listening	
	2ND		Communication skills for effective leadership, barriers to effective communication, Active Listening, Mindful listening	
	3RD		Communication skills for effective leadership, barriers to effective communication, Active Listening, Mindful listening	
10TH WEEK	1ST	UNIT-4: Leader's role in Motivating, Inspiring and Transformative leadership, nurturing team-work	Leading & Mentorship – Influencing & mentoring	
	2ND		Leading & Mentorship – Influencing & mentoring	
	3RD		Goal setting & leadership	
11TH WEEK	1ST		Transformative Leadership, vision & envisioning	
	2ND		Transformative Leadership, vision & envisioning	
	3RD		Motivational role of leader in people management	
12TH WEEK	1ST		Group & team	
	2ND		Team dynamics	
	3RD		Conflict management, strategies in managing conflicts	
13TH WEEK	1ST	UNIT-5: Change Management & Leadership	Conflict management, strategies in managing conflicts	
	2ND		Models of change	
	3RD		Forces driving change	
14TH WEEK	1ST		Forces driving change	
	2ND		Change Management – process, goal, importance	
	3RD		The process of change happening in an organization	
15TH WEEK	1ST		Key aspects of leadership in change management – responsibilities of a change leader.	
	2ND		Key aspects of leadership in change management – responsibilities of a change leader.	
	3RD		Key aspects of leadership in change management – responsibilities of a change leader.	

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