


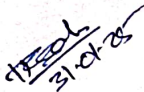


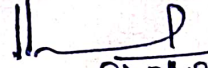
Discipline: Electrical Engg.	Semester: 4 th	Name Of The Teaching Faculty: SUGANDHA PUSPITA MADHUJHARA
Subject: Analog Electronics & OP-AMP (Th2)	No. Of Days Per Week Class Allotted: 04P	Semester From Date: 04.02.2025 To Date: 17.05.2025 No.ofweeks: 15
Week	Class Day	Theory Topic
1 st week		P-N JUNCTION DIODE
	1 st	Introduction to semiconductor and its Application
	2 nd	P-N Junction Diode and its working
	3 rd	V-I characteristic of PN junction Diode.
	4 th	DC load line
2 nd week	1 st	Important terms such as Ideal Diode ,Knee voltage
	2 nd	Junctions breakdown (Zener break down and Avalanche breakdown)
	3 rd	P-N Diode clipping and Diode clamping Circuit.
		SPECIAL SEMICONDUCTOR DEVICES
	4 th	Thermistors , Sensors & barraters
3 rd week	1 st	Zener Diode and Tunnel Diode
	2 nd	PIN Diode
		RECTIFIER CIRCUITS & FILTERS
	3 rd	Classification of rectifiers
	4 th	Analysis of half wave, full wave, centre tapped
4 th week	1 st	Bridge rectifiers and calculate
	2 nd	DC output current and voltage
	3 rd	RMS output current and voltage
	4 th	Rectifier efficiency and Ripple factor
5 th week	1 st	Regulation
	2 nd	Transformer utilization factor
	3 rd	Peak inverse voltage
	4 th	Filters
	1 st	Shunt capacitor filter

6 th week	2 nd	Choke input filter
	3 rd	π filter
		TRANSISTORS
		Principle of Bipolar junction transistor
7 th week	1 st	Different modes of operation of transistor
	2 nd	Current components in a transistor
	3 rd	Transistors and amplifier
	4 th	Transistor circuit configuration & its characteristics
8 th week	1 st	CB CE CC Configuration
		TRANSISTOR CIRCUITS
	2 nd	Transistor biasing
	3 rd	Stabilization and Stability factor
		Different method of Transistors Biasing
9 th week	1 st	Base resistor method
	2 nd	Collector to base bias
	3 rd	Self bias or voltage divider method
		TRANSISTOR AMPLIFIERS & OSCILLATORS
	4 th	Practical circuit of transistor amplifier, DC load line and DC equivalent circuit
10 th week		Calculation of gain, Phase reversal, H-parameters of transistors
	1 st	
	2 nd	Simplified H-parameters of transistors, Analysis of CB, CE, CC amplifier using generalized approximate model
	3 rd	R.C coupled amplifier and Transformer coupled amplifier
11 th week	4 th	Feedback in amplifier
	1 st	General theory of feedback
	2 nd	Negative feedback circuit, Advantage of negative feedback
	3 rd	Power amplifier and its classification
12 th week	4 th	Difference between voltage amplifier and power amplifier
	1 st	Transformer coupled class-A power amplifier
	2 nd	Class A push – pull amplifier, Class-B push –pull amplifier
	3 rd	Types of oscillators and Essentials of transistor oscillator
	4 th	Principle of operation of tuned collector Hartley, colpitt

13 th week	1 st	Phaseshift, Wein-bridge oscillator
	2 nd	FIELD EFFECT TRANSISTOR
	3 rd	Classification of FET Advantages of FET over BJT and Principle of operation of BJT
	4 th	FET parameters, DC drain resistance, AC drain resistance, Trans-conductance, Biasing of FET
		OPERATIONAL AMPLIFIERS
14 th week	1 st	General circuit simple of OP-AMP and IC – CA – 741 OP-AMP
	2 nd	Operational amplifier stages
	3 rd	Equivalent circuit of operational amplifier
	4 th	Open loop OP-AMP configuration and OPAMP with feedback
15 th week		Inverting OP-AMP and Noninverting OP-AMP
	1 st	Voltage follower & buffer
	2 nd	Differential amplifier
	3 rd	Adder or summing amplifier
	4 th	Subtractor , integrator, differentiator and comparator


 30/01/25
 SIGN OF FACULTY


 SIGN OF SR.LECT,
 Head of Dept. (HOD)
 Electrical & ETC
 G. E. T (POLY), ...


 31/01/25
 SIGN OF PRINCIPAL