

GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN

ACADEMIC SESSION(2023-24)

Discipline : ELECTRICAL ENGG.		Semester: 4th Sem	Name of the Teaching Faculty :Leena Marndi
Subject : AE&OPAMP		No. of Days / per week class allotted : 04	Semester From date : 16.01.2024 To Date : 26.04.2024
MONTH	Week	Day	Topics
JANUARY	3rd	2nd	P-N Junction Diode ,Working of Diode,V-I characteristic of PN junction Diode.
		4th	DC load line ,Important terms such as Ideal Diode, Knee voltage,Junctions break down. Zener breakdown, Avalanche breakdown
		6th	P-N Diode clipping Circuit, Diode clamping Circuit
	4TH	1st	Thermistors, Sensors & barretters, Zener Diode
		4th	Tunnel Diode
		6th	PIN Diode
	5TH	1st	Classification of rectifiers,Analysis of half wave, full wave centre tapped and Bridge rectifiers and calculate:DC output current and voltage, RMS output current and voltage,
		2nd	Rectifier efficiency
FEBRUARY	1st	4th	Ripple factor,Regulation
		6th	Transformer utilization factor,Peak inverse voltage
	2nd	1st	Shunt capacitor filter, Choke input filter
		2nd	π filter
		4th	Principle of Bipolar junction transistor,Different modes of operation of transistor,
		6th	Current components in a transistor
	3rd	1st	Transistor as an amplifier,Transistor circuit configuration
		2nd	its characteristics,CB Configuration ,CE Configuration,CC Configuration
		4th	Transistor biasing,Stabilization,Stability factor
		6th	Different method of Transistors Biasing ,Base resistor method
		1st	Collector to base bias

	4TH	2nd	FIRST MONTHLY TEST
		4th	Self bias or voltage divider method
		6th	Practical circuit of transistor amplifier
	5TH	1st	DC load line and DC equivalent circuit
		2nd	,AC load line and AC equivalent circuit,Calculation of gain,Phase reversal
		4th	H-parameters of transistors ,Simplified H-parameters of transistors
MARCH	1st	6th	Generalised approximate model,Analysis of CB, CE, CC amplifier using generalised approximate mode
	2nd	1st	Multi stage transistor amplifier, R.C. coupled amplifier
		4th	Transformer coupled amplifier
		6th	GUARDIAN-TEACHER MEETING
	3rd	1st	Feed back in amplifier,General theory of feed back
		2nd	Negative feedback circuit,Advantage of negative feed back
		4th	Power amplifier and its classification,Difference between voltage amplifier and power amplifier
		6th	Transformer coupled class A power amplifier
	4TH	1st	Class A push – pull amplifier
		2nd	Class B push – pull amplifier
		4th	Oscillators ,Types of oscillators ,Essentials of transistor oscillator
		6th	INTERNAL
	5TH	4th	Principle of operation of tuned collector, phase shift
		6th	Hartley, colpitt
APRIL	1st	2nd	wein bridge oscillator
		4th	Classification of FET,Advantages of FET over BJT
		6TH	Principle of operation of FET
	2nd	1st	FET parameters:DC drain resistance,AC drain resistance,Trans-conductance
		2nd	Biasing of FET
		6th	GUARDIAN-TEACHER MEETING
	3rd	1st	General circuit simple of OP-AMP and IC – CA – 741 OP AMP,Operational amplifier stages,Equivalent circuit of operational amplifier
		2nd	Open loop OP-AMP configuration ,OPAMP with fed back

		4th	Inverting OP-AMP ,Non inverting OP-AMP
		6th	Voltage follower & buffer
	4TH	1st	Differential amplifier: Adder or summing amplifier,Subtractor
		2nd	Integrator,Differentiator,Comparator
		4th	SECOND MONTHLY TEST
		6th	Rivision

TOTAL PERIOD=53