GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN

ACADEMIC YEAR-2020-21

Discipline : ELECTRICAL ENGG.	Semester: 4th Sem	Name of the Teaching Faculty : Leena Marndi(Sr. Lect, in ETC)
Subject : A.E.C&OPMP	No. of Days / per week class allotted : 04	Semester From date : 25.01.2021 To Date : 30.04.2021

MONTH	Week	Day	Unit	Topics
JANUARY	5TH	1ST	I	P-N Junction Diode ,Working of Diode
		3RD		V-I characteristic of PN junction Diode.
		5TH		DC load line, Important terms such as Ideal Diode, Knee voltage
FABRUARY	1ST	1ST		Junctions break down. , Zener breakdown , Avalanche breakdown
		2ND		P-N Diode clipping Circuit.
		3RD		P-N Diode clamping Circuit
		5TH	II	Thermistors, Sensors & barretters
	2ND	1ST		Zener Diode
		2ND		Tunnel Diode , PIN Diode
		3RD		RIVISION
		5TH	III	Classification of rectifiers
	3RD	1ST		Analysis of half wave, full wave centre tapped calculate: ,DC output current and voltage, RMS output current and voltage,
		3RD		Rectifier efficiency Ripple factor, Regulation, , Transformer utilization factor Peak inverse voltage
		5TH		DC output current and voltage , RMS output current and voltage
	4TH	1ST		Rectifier efficiency , Ripple factor , Regulation, Transformer utilization factor ,Peak inverse voltage

		2ND		Analysis Bridge rectifiers ,DC output current and voltage, RMS output current and voltage, Rectifier efficiency , Ripple factor, Regulation, Transformer utilization factor, Peak inverse voltage
		3RD		Filters: , Shunt capacitor filter , Choke input filter , π filte
		5TH		TRANSISTORS:Principle of Bipolar junction transistor
	1ST	1ST	IV	Different modes of operation of transistor , Current components in a transistor
		2ND		Transistor as an amplifier
		3RD		Transistor circuit configuration & its characteristics CB Configuratio
	2ND	1ST		CE Configuration,CC Configuration
		2ND	V	Transistor biasing , Stabilization Stability factor
		3RD		Different method of Transistors Biasing
		5TH		Base resistor method,Collector to base bias
	3RD	1ST		Self bias or voltage divider method
		2ND	VI	Practical circuit of transistor amplifier
		3RD		DC load line and DC equivalent circuit, AC load line and AC equivalent circuit
		5TH		Calculation of gain ,Phase reversal
MARCH	4TH	1ST		H-parameters of transistors , Simplified H-parameters of transistors
		2ND		Generalised approximate model Analysis of CB, CE, CC amplifier using generalised approximate model Multi stage transistor amplifier
		3RD		R.C. coupled amplifier ,Transformer coupled amplifier
		5TH		Feed back in amplifier ,General theory of feed back , Negative feedback circuit , Advantage of negative feed back
	5TH	2ND		Power amplifier and its classification , Difference between voltage amplifier and power amplifier
		3RD		Oscillators , Types of oscillators , Essentials of transistor oscillator
APRIL	2ND	1ST		Principle of operation of tuned collector
		2ND		Hartley, colpitt,
		3RD		phase shift, wein bridge oscillator (no mathematical derivations)
		5TH	VII	Classification of FET ,Advantages of FET over BJT , Principle of operation of BJT

	3RD	1ST		FET parameters (no mathematical derivation) ,1 DC drain resistance
		2ND		AC drain resistance , Trans-conductance
		5TH		Biasing of FET
	4TH	1ST	VIII	General circuit simple of OP-AMP and IC – CA – 741 OP AMP
		2ND		Operational amplifier stages , Equivalent circuit of operational amplifier
		5TH		Open loop OP-AMP configuration , OPAMP with fed back
	5TH	1ST		Inverting OP-AMP
		2ND		RIVISION
		3RD	VIII	Non inverting OP-AMP , Voltage follower & buffer8.9 Differential amplifier , Adder or summing amplifier , Sub tractor
		5TH		Integrator . Differentiator , Comparator

Total Class
= 49