

GOVT. POLYTECHNIC NAYAGARH LESSON PLAN

ACADEMIC YEAR-2023-24

Discipline : ELECTRICAL ENGG.		Semester: 4th Sem		Name of the Teaching Faculty : Jadunath Murmu(Sr. Lect, in ETC)
Subject : A.E.C&OPMP		No. of Days / per week class allotted : 04		SFrom date : 16.01.2024 To Date : 26.04.2024
Week	Day	Date	Class Day	Topics
3rd week of January.	Wednesday	17.01.2024	1st	Introduction
	Thursday	18.01.2024	2nd	1 . 1 P-N Junction Diode 1 . 2 Working of Diode
	Friday	19.01.2024	3rd	1 . 3 V-I characteristic of PN junction Diode.
4th week of January	MONDAY	22.01.2024	1st	1 . 4 DC load line 1 . 5 Important terms such as Ideal Diode, Knee voltage 1 . 6 Junctions break down. 1.6.1 Zener breakdown 1.6.2 Avalanche breakdown
	Wednesday	24.01.2024	2nd	1 . 7 P-N Diode clipping Circuit.
	Thursday	25.01.2024	3rd	1 . 8 P-N Diode clamping Circuit
5th week of January	MONDAY	29.01.2024	1st	2 . 1 Thermistors, Sensors & barretters
	Wednesday	31.01.2024	2nd	2 . 2 Zener Diode
1st week of February	Thursday	01.02.2024	1st	2 . 3 Tunnel Diode
	Friday	02.02.2024	2nd	2 . 4 PIN Diode
2nd week of February	MONDAY	05.02.2024	1st	3.1 Classification of rectifiers
	Wednesday	07.02.2024	2nd	3.2 Analysis of half wave, calculate: 3.2.1 DC output current and voltage, 3.2.2 RMS output current and voltage,
	Thursday	08.02.2024	3rd	3.2.3 Rectifier efficiency 3.2.4 Ripple factor, 3.2.5 Regulation, 3.2.6 Transformer utilization factor 3.2.7 Peak inverse voltage
	Friday	09.02.2024	4th	full wave centre tapped 3.2.1 DC output current and voltage 3.2.2 RMS output current and voltage
3rd week of February	MONDAY	12.02.24	1st	3.2.3 Rectifier efficiency 3.2.4 Ripple factor ,3.2.5 Regulation, 3.2.6 Transformer utilization factor 3.2.7 Peak inverse voltage
	Thursday	15.02.24	2nd	Analysis Bridge rectifiers 3.2.1 DC output current and voltage, 3.2.2 RMS output current and voltage,
	Friday	16.02.24	3rd	3.3 Filters: 3.3.1 Shunt capacitor filter 3.3.2 Choke input filter 3.3.3 π filte
4th week of February	MONDAY	19.02.24	1st	TRANSISTORS: 4.1 Principle of Bipolar junction transistor
	Wednesday	21.02.24	2nd	4.2 Different modes of operation of transistor 4.3 Current components in a transistor
	Thursday	22.02.23	3rd	4.4 Transistor as an amplifier
	Friday	23.02.24	4th	4.5 Transistor circuit configuration & its characteristics
5th week of February	MONDAY	26.02.24	1st	.5.2 CE Configuration
	Wednesday	28.02.24	2nd	4.5.3 CC Configuration
	Thursday	29.02.24	3rd	REVISION
1st week of March	Friday	01.03.24	1st	5.1 Transistor biasing
2nd week of March	MONDAY	04.03.24	1st	5.2 Stabilization 5.3 Stability factor
	Wednesday	06.03.24	2nd	5.4 Different method of Transistors Biasing
	Thursday	07.03.24	3rd	5.4.1 Base resistor method 5.4.2 Collector to base bias
3rd week of March	MONDAY	11.03.24	1st	5.4.3 Self bias or voltage divider method
	Wednesday	13.03.24	2nd	REVISION
	Thursday	14.03.24	3rd	6.1 Practical circuit of transistor amplifier 6.2 DC load line and DC equivalent circuit

Week	Day	Date	Class Day	Topics
	Friday	15.03.24	4th	6.3 AC load line and AC equivalent circuit 6.4 Calculation of gain 6.5 Phase reversal
4th week of March	MONDAY	18.03.24	1st	6.6 H-parameters of transistors 6.7 Simplified H-parameters of transistors
	Wednesday	20.03.24	2nd	6.8 Generalised approximate model 6.9 Analysis of CB, CE, CC amplifier using generalised approximate model
	Thursday	21.03.24	3rd	6.10 Multi stage transistor amplifier 6.10.1 R.C. coupled amplifier 6.10.2 Transformer coupled amplifier
	Friday	22.03.24	4th	6.11 Feed back in amplifier 6.11.1 General theory of feed back 6.11.2 Negative feedback circuit 6.11.3 Advantage of negative feed back
5th week of March	Wednesday	27.03.24	1st	6.12 Power amplifier and its classification 6.12.1 Difference between voltage amplifier and power amplifier
	Thursday	28.03.24	2nd	6.12.2 Transformer coupled class A power amplifier 6.12.3 Class A push – pull amplifier
1st week of April	Wednesday	03.04.24	1st	6.12.4 Class B push – pull amplifier
	Thursday	04.04.24	1st	6.13.1 Types of oscillators 6.13.2 Essentials of transistor oscillator
	Friday	05.04.24	2nd	Principle of operation of tuned collector,
			3rd	Hartley, colpitt
2nd week of April	MONDAY	08.04.24	1st	phase shift, weinbridge oscillator
	Wednesday	10.04.24	2nd	7.1 Classification of FET 7.2 Advantages of FET over BJT
	Friday	12.04.24	3rd	7.3 Principle of operation of FET
3rd week of April	MONDAY	15.04.24	1st	7.4 FET parameters (no mathematical derivation) 7.4.1 DC drain resistance 7.4.2 AC drain resistance 7.4.3 Trans-conductance
	Thursday	18.04.24	2nd	7.5 Biasing of FET
	Friday	19.04.24	3rd	OPERATIONAL AMPLIFIERS: 8.1 General circuit simple of OP-AMP and IC – CA – 741 OP AMP 8.2 Operational amplifier stages
4th week of April	MONDAY	22.04.24	1st	8.3 Equivalent circuit of operational amplifier 8.4 Open loop OP-AMP configuration 8.5 OPAMP with fed back 8.6 Inverting OP-AMP
	Wednesday	24.04.24	2nd	8.7 Non inverting OP-AMP 8.8 Voltage follower & buffer
	Thursday	25.04.24	3rd	8.9 Differential amplifier 8.9.1 Adder or summing amplifier 8.9.2 Sub tractor
	Friday	26.04.24	4th	8.9.3 Integrator 8.9.4 Differentiator 8.9.5 Comparator

Signature of Sr.Lect./Lect.

Signature of HOD
Electrical Dept.