GOVT. POLYTECHNIC NAYAGARH LESSON PLAN

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	Semester From date : 10.03.2022 To Date : 10.06.2022
Week	**Class Day**	**Topics**
2ND MARCH from dt.10.3.22 to dt.12.3.22	1st	1 . 1 P-N Junction Diode 1 . 2 Working of Diode
	2nd	1 . 3 V-I characteristic of PN junction Diode.
3ND MARCH from dt.14.3.22 to dt.19.3.22	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
	2nd	1 . 7 P-N Diode clipping Circuit.
	3rd	1 . 8 P-N Diode clamping Circuit
	4th	REVISION
4th MARCH from dt.21.3.22 to dt.26.3.22	1st	2 . 1 Thermistors, Sensors & barretters
	2nd	2 . 2 Zener Diode
	3rd	2 . 3 Tunnel Diode
	4th	2 . 4 PIN Diode
5th MARCH from dt.28.3.22 to dt.31.3.22	1st	3.1 Classification of rectifiers
	2nd	3.2 Analysis of half wave, calculate: 3.2.1 DC output current and voltage, 3.2.2 RMS output current and voltage,
	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
	4th	full wave centre tapped 3.2.1 DC output current and voltage 3.2.2 RMS output current and voltage
1ST APRIL from dt.02.4.22 to dt.02.4.22	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
2nd APRIL from dt.04.4.22 to dt.09.4.22	1st	Analysis Bridge rectifiers 3.2.1 DC output current and voltage, 3.2.2 RMS output current and voltage, 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
	2nd	3.3 Filters: 3.3.1 Shunt capacitor filter 3.3.2 Choke input filter 3.3.3 π filte
	3rd	TRANSISTORS: 4.1 Principle of Bipolar junction transistor
	4th	4.2 Different modes of operation of transistor 4.3 Current components in a transistor
3rd APRIL from dt.11.4.22 to dt.16.4.22	1st	4.4 Transistor as an amplifier
	2nd	4.5 Transistor circuit configuration & its characteristics 4.5.1 CB Configuratio
	3rd	.5.2 CE Configuration
	4th	4.5.3 CC Configuration
4th APRIL from dt.18.4.22 to dt.23.4.22	1st	REVISION
	2nd	5.1 Transistor biasing
	3rd	5.2 Stabilization 5.3 Stability factor
	4th	5.4 Different method of Transistors Biasing
5th APRIL from dt.24.4.22 to dt.30.4.22	1st	5.4.1 Base resistor method
	2nd	5.4.2 Collector to base bias
	3rd	5.4.3 Self bias or voltage divider method
	4th	REVISION

1st MAY from dt.02.5.22 to dt.07.5.22	1st	6.1 Practical circuit of transistor amplifier
	2nd	6.2 DC load line and DC equivalent circuit, 6.3 AC load line and AC equivalent circuit
	3rd	6.4 Calculation of gain 6.5 Phase reversal
	4th	6.6 H-parameters of transistors 6.7 Simplified H-parameters of transistors
2nd MAY from dt.09.5.22 to dt.14.5.22	1st	6.8 Generalised approximate model 6.9 Analysis of CB, CE, CC amplifier using generalised approximate model 6.10 Multi stage transistor amplifier
	2nd	6.10.1 R.C. coupled amplifier 6.10.2 Transformer coupled amplifier
	3rd	.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
	4th	6.12 Power amplifier and its classification 6.12.1 Difference between voltage amplifier and power amplifier
3rd MAY from dt.16.5.22 to dt.21.5.22	1st	**6.13 Oscillators** **6.13.1 Types of oscillators** **6.13.2 Essentials of transistor oscillator**
	2nd	6.13.3 Principle of operation of tuned collector
	3rd	Hartley, colpitt,
	4th	phase shift, wein bridge oscillator (no mathematical derivations)
4th MAY from dt.23.5.22 to dt.28.5.22	1st	7.1 Classification of FET 7.2 Advantages of FET over BJT 7.3 Principle of operation of BJT
	2nd	7.4 FET parameters (no mathematical derivation) 7.4.1 DC drain resistance
	3rd	7.4.2 AC drain resistance 7.4.3 Trans-conductance
	4th	7.5 Biasing of FET
5th MAY	1st	8.1 General circuit simple of OP-AMP and IC – CA – 741 OP AMP
1st june from dt.01.6.22 to dt.3.6.22	1st	8.2 Operational amplifier stages 8.3 Equivalent circuit of operational amplifier
	2nd	8.4 Open loop OP-AMP configuration 8.5 OPAMP with fed back
	3rd	8.6 Inverting OP-AMP
2ND JUNE from dt.06.6.22 to dt.10.6.22	1st	8.7 Non inverting OP-AMP 8.8 Voltage follower & buffer
	2nd	8.9 Differential amplifier 8.9.1 Adder or summing amplifier 8.9.2 Sub tractor
	3rd	8.9.3 Integrator 8.9.4 Differentiator 8.9.5 Comparato
	4th	REVISION

10/03/2022
Signature of Lect.

Signature of HOD