

Lesson Plan			
	Discipline:Electrical Engineering	Semester-4th Summer 2024	Name of the Teachng Faculty: Sri Nigam Prasad Mohapatra
Sl. No.	Subject- Analog Electronics and OP-AMP	No. Of Days/Week class allotted:04	Semester From date: 16/01/2024 To date: 26/04/2024. No of weeks: 15
	Weeks/Months	Class Day	Topic
1	1st Week	1st(16.01.24)	1 . 1 P-N Junction Diode
		2nd(18.01.2024)	1 . 2 Working of Diode 1 . 3 V-I characteristic of PN junction Diode
		3rd(19.01.2024)	1 . 4 DC load line 1 . 5 Important terms such as Ideal Diode, Knee voltage
2	2nd Week	1st(22.01.2024)	1 . 6 Junctions break down. 1.6.1 Zener breakdown 1.6.2 Avalanche breakdown
		2nd(25.01.2024)	1 . 7 P-N Diode clipping Circuit. 1 . 8 P-N Diode clamping Circuit
3	3rd Week	1st(29.01.2024)	2 . 1 Thermistors, Sensors & barretters
		2nd(30.01.2024)	2 . 1 Thermistors, Sensors & barretters
		3rd(1.02.2024)	2 . 2 Zener Diode
		4th(2.02.2024)	2 . 3 Tunnel Diode
4	4th Week	1st(5.02.2024)	2 . 4 PIN Diode
		2nd(6.02.2024)	3.1 Classification of rectifiers
		3rd(8.02.2024)	3.2 Analysis of half wave rectifier
		4th(9.02.2024)	3.2 Analysis of full wave centre tapped rectifier
5	5th Week	1st(12.02.2024)	3.2 Analysis of full wave bridge rectifier
		2nd(13.02.2024)	3.3.1 Shunt capacitor filter
		3rd(15.02.2024)	3.3.2 Choke input filter
		4th(16.02.2024)	3.3.3 π filter
6	6th Week	1st(19.02.2024)	4.1 Principle of Bipolar junction transisto
		2nd(20.02.2024)	4.2 Different modes of operation of transistor
		3rd(22.02.2024)	4.3 Current components in a transisto
		4th(23.02.2024)	4.4 Transistor as an amplifier
7	7th Week	1st(26.02.2024)	4.5 Transistor circuit configuration & its characteristics
		2nd(27.02.2024)	4.5.1 CB Configuration
		3rd(29.02.2024)	4.5.2 CE Configuration 4.5.3 CC Configuration
		4th(01.03.2024)	5.1 Transistor biasing
8	8th Week	1st(4.03.2024)	5.2 Stabilization 5.3 Stability factor
		2nd(7.03.2024)	5.4 Different method of Transistors Biasin 5.4.1 Base resistor method
		1st(11.03.2024)	5.4.2 Collector to base bias

9	9th Week	2nd(12.03.2024)	5.4.3 Self bias or voltage divider method
		3rd(14.03.2024)	6.1 Practical circuit of transistor amplifier 6.2 DC load line and DC equivalent circuit
		4th(15.03.2024)	6.3 AC load line and AC equivalent circuit 6.4 Calculation of gain
10	10th Week	1st(18.03.2024)	6.5 Phase reversal 6.6 H-parameters of transistors
		2nd(19.03.2024)	6.7 Simplified H-parameters of transistor
		3rd(21.03.2024)	6.8 Generalised approximate model 6.9 Analysis of CB, CE, CC amplifier using generalised approximate model
		4th(22.03.2024)	6.10 Multi stage transistor amplifier 6.10.1 R.C. coupled amplifie
11	11th Week	1st(28.03.2024)	6.10.2 Transformer coupled amplifier 6.11 Feed back in amplifier
		2nd(2.04.2024)	6.11.1 General theory of feed back 6.11.2 Negative feedback circuit 6.11.3 Advantage of negative feed back
		3rd(4.04.2024)	6.12 Power amplifier and its classification 6.12.1 Difference between voltage amplifier and power amplifie
		4th(5.04.2024)	6.12.2 Transformer coupled class A power amplifier 6.12.3 Class A push – pull amplifier 6.12.4 Class B push – pull amplifie
13	13th Week	1st(8.04.2024)	6.13 Oscillators 6.13.1 Types of oscillators 6.13.2 Essentials of transistor oscillato
		2nd(9.04.2024)	6.13.3 Principle of operation of tuned collector, Hartley, colpitt, phase shift, wein-bridge oscillator (no mathematical derivations)
		3rd(12.04.2024)	7.1 Classification of FET 7.2 Advantages of FET over BJT
14	14th Week	1st(15.04.2024)	7.3 Principle of operation of BJT
		2nd(16.04.2024)	7.4 FET parameters (no mathematical derivation)
		3rd(18.04.2024)	7.4.1 DC drain resistance 7.4.2 AC drain resistance
		4th(19.04.2024)	7.4.3 Trans-conductance 7.5 Biasing of FET
15	15th Week	1st(22.04.2024)	8.1 General circuit simple of OP-AMP and IC – CA – 741 OP AMP
		2nd(23.04.2024)	8.2 Operational amplifier stages
		3rd(25.04.2024)	8.3 Equivalent circuit of operational amplifier 8.4 Open loop OP-AMP configuration
		4th(26.04.2024)	8.5 OPAMP with fed back 8.6 Inverting OP-AMP 8.9.2 Sub tractor 8.9.3 Integrator 8.9.4 Differentiato