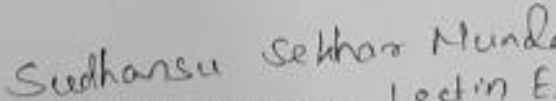


LESSON PLAN 2024(Summer)

Dicipline:	ELECTRICAL	Name of the Teaching faculty:	Sudhansu Sekhar Munda Lect in E &TC
Subject:	Analog Electronics Circuit .	Semester From date:	16.01.2024 to Date: 24.04.2024 No . Of Weeks:15
Week	Class Day	Theory Topics	
1st	1st	P-N JUNCTION DIODE: N JUNCTION DIODE , 1 . 2 Working of Diode	
	2nd	1 . 3 V-I characteristic of PN junction Diode.	
	3rd	1 . 4 DC load line	
	4th	1 . 5 Important terms such as Ideal Diode, Knee voltage	
2nd	1st	1 . 6 Junctions break down. 1.6.1 Zener breakdown 1.6.2 Avalanche breakdown	
	2nd	1 . 7 P-N Diode clipping Circuit. 1 . 8 P-N Diode clamping Circuit	
	3rd	SPECIAL SEMICONDUCTOR DEVICES: 2 . 1 Thermistors	
	4th	Sensors & Barretters	
3rd	1st	2 . 2 Zener Diode	
	2nd	2 . 3 Tunnel Diode	
	3rd	2 . 4 PIN Diode	
	4th	RECTIFIER CIRCUITS & FILTERS: 3.1Classification of rectifiers	
4th	1st	3.2 Analysis of half wave, full wave	
	2nd	Analysis of half wave centre tapped and Bridge rectifiers	
	3rd	3.2.1 Calculate DC output current and voltage 3.2.2 RMS output current and voltage	
	4th	3.2.3 Rectifier efficiency	
5th	1st	Filters: 3.3.1 Shunt capacitor filter	
	2nd	3.3.2 Choke input filter 3.3.3 π filter	
	3rd	TRANSISTORS : 4.1Principle of Bipolar junction transistor	
	4th	4.2 Different modes of operation of transistor	
6th	1st	4.3 Current components in a transistor 4.4 Transistor as an amplifier	
	2nd	4.5 Transistor circuit configuration & its characteristics	
	3rd	4.5.1 CB Configuration	
	4th	4.5.2 CE Configuration	

7th	1st	4.5.3 CC Configuration	
	2nd	TRANSISTOR CIRCUITS:	5.1 Transistor biasing
	3rd	5.2 Stabilization	
	4th	5.3 Stability factor	
8th	1st	5.4 Different method of Transistors Biasing	
	2nd	5.4.1 Base resistor method	
	3rd	5.4.2 Collector to base bias	
	4th	5.4.3 Self bias or voltage divider method	
9th	1st	TRANSISTOR AMPLIFIERS & OSCILLATORS: Practical circuit of transistor amplifier	6.1
	2nd	6.2 DC load line and DC equivalent circuit	
	3rd	6.3 AC load line and AC equivalent circuit	
	4th	6.4 Calculation of gain	
10th	1st	6.5 Phase reversal	
	2nd	6.6 H-parameters of transistors	
	3rd	6.7 Simplified H-parameters of transistors	
	4th	6.8 Generalised approximate model	
11th	1st	6.9 Analysis of CB, CE, CC amplifier using generalised approximate model	
	2nd	6.10 Multi stage transistor amplifier 6.10.1 R.C. coupled amplifier 6.10.2 Transformer coupled amplifier	
	3rd	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	

	4th	6.12 Power amplifier and its classification 6.12.1 Difference between voltage amplifier and power amplifier 6.12.2 Transformer coupled class A power amplifier 6.12.3 Class A push-pull amplifier 6.12.4 Class B push-pull amplifier
12th	1st	6.13 Oscillators 6.13.1 Types of oscillators
	2nd	6.13.2 Essentials of transistor oscillator
	3rd	6.13.3 Principle of operation of tuned collector, Hartley, colpitt, phase shift, wein bridge oscillator (no mathematical derivations)
	4th	FIELD EFFECT TRANSISTOR: 7.1 Classification of FET
13th	1st	7.2 Advantages of FET over BJT
	2nd	7.3 Principle of operation of BJT
	3rd	7.4 FET parameters (no mathematical derivation)
	4th	7.4.1 DC drain resistance 7.4.2 AC drain resistance
14th	1st	7.4.3 Trans-conductance 7.5 Biasing of FET
	2nd	OPERATIONAL AMPLIFIERS: 8.1 General circuit simple of OP-AMP and IC - CA - 741 OP AMP
	3rd	8.2 Operational amplifier stages
	4th	8.3 Equivalent circuit of operational amplifier
15th	1st	8.4 Open loop OP-AMP configuration 8.5 OPAMP with fed back 8.6 Inverting OP-AMP 8.7 Non inverting OP-AMP
	2nd	8.8 Voltage follower & buffer
	3rd	8.9 Differential amplifier 8.9.1 Adder or summing amplifier 8.9.2 Subtractor 8.9.3 Integrator
	4th	8.9.4 Differentiator 8.9.5 Comparator


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 Faculty Signature