Lesson Plan 2024(1)

Subject :- AE &OP-Amp(Code) TH-2Name of faculty:- Bikram Keshari Parida

Semester :-4thClass allotted5p/w Branch :- Electrical engg

Discipline	Semester:-4th	From date:-16/01/24 To date:26/04/24	Teaching Aid
Subject:	No. of days/ per week 4p/w:5	Theory/ Practical –Topics/Lesson	
Week	Date/Period		

1	16/01/24 – 20/01/24	P-N JUNCTION DIODE: 1 . 1 P-N Junction Diode 1 . 2 Working of Diode 1 . 3 V-I characteristic of PN junction Diode. 1 . 4 DC load line 1 . 5 Important terms such as Ideal Diode, Knee voltage	White board & marker
2	22/01/24 to 27/01/24	1 . 6 Junctions break down. 1.6.1 Zener breakdown 1.6.2 Avalanche breakdown 1 . 7 P-N Diode clipping Circuit. 1 . 8 P-N Diode clamping Circuit	White board & marker
3	29/01/24 To 03/02/24	SPECIAL SEMICONDUCTOR DEVICES: 2 . 1 Thermistors, Sensors & barretters 2 . 2 Zener Diode 2 . 3 Tunnel Diode 2 . 4 PIN Diode	White board & marker
4	5/2/24 To 10/2/24	RECTIFIER CIRCUITS & FILTERS: 3.1 Classification of rectifiers 3.2 Analysis of half wave, full wave centre tapped and Bridge rectifiers and calculate: 3.2.1 DC output current and voltage 3.2.2 RMS output current and voltage	White board & marker
5	12/2/24 To 17/02/24	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	White board & marker
6	19/02/24 To 24/2/24	3.3 Filters: 3.3.1 Shunt capacitor filter 3.3.2 Choke input filter 3.3.3 π filter	White board & marker
7	26/2/24 To 2/3/24	TRANSISTORS: 4.1 Principle of Bipolar junction transistor 4.2 Different modes of operation of transistor 4.3 Current components in a transistor 4.4 Transistor as an amplifier	White board & marker
8	4/3/24 To 9/3/24	4.5 Transistor circuit configuration & its characteristics 4.5.1 CB Configuration 4.5.2 CE Configuration 4.5.3 CC Configuration	White board & marker
9	11/3/24 To 16/3/24	TRANSISTOR AMPLIFIERS & OSCILLATORS: 6.1 Practical circuit of transistor amplifier 6.2 DC load line and DC equivalent circuit 6.3 AC load line and AC equivalent circuit 6.4 Calculation of gain 6.5 Phase reversal 6.6 H-parameters of transistors 6.7 Simplified H-parameters of transistors	White board & marker
10	18/3/24 To 23/3/24	6.8 Generalised approximate model 6.9 Analysis of CB, CE, CC amplifier using generalised approximate model 6.10 Multi stage transistor amplifier 6.10.1 R.C. coupled amplifier 6.10.2 Transformer coupled amplifier	White board & marker
11	277/3/24 To 30/3/24	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	White board & marker

		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	
12	2/4/24 To 6/4/24	6.13 Oscillators 6.13.1 Types of oscillators 6.13.2 Essentials of transistor oscillator 6.13.3 Principle of operation of tuned collector, Hartley, colpitt, phase shift, weinbridge oscillator	White board & marker & smart board
13	8/4/24 To 13/4/24	FIELD EFFECT TRANSISTOR: 7.1 Classification of FET 7.2 Advantages of FET over BJT 7.3 Principle of operation of BJT 7.4 FET parameters (no mathematical derivation) 7.4.1 DC drain resistance 7.4.2 AC drain resistance 7.4.3 Trans-conductance 7.5 Biasing of FET	White board & marker
14	15/4/24 To 20/4/24	OPERATIONAL AMPLIFIERS: 8.1 General circuit simple of OP-AMP and IC – CA – 741 OP AMP 8.2 Operational amplifier stages 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 8.7 Non inverting OP-AMP	White board & marker
15	22/4/24 To 26/4/24	8.8 Voltage follower & buffer 8.9 Differential amplifier 8.9.1 Adder or summing amplifier 8.9.2 Sub tractor 8.9.3 Integrator 8.9.4 Differentiator 8.9.5 Comparator	White board & marker& smart board

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Signature of HOD

Signature of faculty