LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty : SUNIL KUMAR PAL RAJENDRA DORA .	Academic Year: 2022-23
Course No: Th.2	Course Name: Analog Electronics and OP-AMP
Programme: Diploma	Branch: Electrical
Year/ Semester :IV	Section: E1 ,E2

Sl. No	Period	Time (min)	Unit	Topic to be Covered	Teaching Method
1.	1.	55	1	Introduction	Chalk & duster
2.	2.	55	1	P-N Junction Diode, Working of Diode	Chalk & duster
3.	3.	55	1	V-I characteristic of PN junction Diode, DC load line	Chalk & duster
4.	4.	55	1	Important terms such as Ideal Diode, Knee voltage, Junctions break down, Zener breakdown, Avalanche breakdown	Chalk & duster
5	5	55	1	P-N Diode clipping Circuit.	Chalk & duster
6	6	55	1	P-N Diode clamping Circuit	Audio -visual
7	7	55	2	Thermistors,	Chalk & duster
8	8	55	2	Sensors &barretters	Chalk & duster
9	9	55	2	Zener Diode	Chalk & duster
10	10	55	2	Tunnel Diode	Chalk & duster
11.	11.	55	2	PIN Diode	Chalk & duster
12.	12.	55	3	Classification of rectifiers	Chalk & duster
13.	13.	55	3	Analysis of half wave, full wave centre tapped and Bridge rectifiers and calculateDC output current and voltage	Chalk & duster
14.	14.	55	3	RMS output current and voltage, Rectifier efficiency, Ripple factor,	Chalk & duster
15	15	55	3	Regulation, Transformer utilization factor, Peak inverse voltage	Chalk & duster
16	16	55	3	Shunt capacitor filter	Chalk & duster
17	17	55	3	Choke input filter	Audio -visual
18	18	55	3	π filter	Chalk & duster
19	19	55	4	Principle of Bipolar junction transistor	Audio -visual
20	20	55	4	Different modes of operation of transistor	Chalk & duster
21.	21.	55	4	Current components in a transistor	Chalk & duster
22.	22.	55	4	Transistor as an amplifier	Chalk & duster
23.	23.	55	4	Transistor circuit configuration & its characteristics CB Configuration	Chalk & duster
24.	24.	55	4	CE Configuration	Chalk & duster
25	25	55	4	CC Configuration	Chalk & duster
26	26	55	5	Transistor biasing	Chalk & duster
27	27	55	5	Stabilization	Chalk & duster
28	28	55	5	Stability factor	Chalk & duster
29	29	55	5	Different method of Transistors Biasing	Chalk & duster
30	30	55	5	Base resistor method	Chalk & duster
31.	31.	55	5	Collector to base bias	Chalk & duster
32.	32.	55	5	Self bias or voltage divider method	Chalk & duster
33.	33.	55	6	Practical circuit of transistor amplifier	Chalk & duster
34	34	55	6	DC load line and DC equivalent circuit, AC load line and AC	Chalk & duster

				equivalent circuit	
35	35	55	6	Calculation of gain, Phase reversal, H-parameters of transistors	Chalk & duster
36	36	55	6	Simplified H-parameters of transistors, Generalised approximate model	Chalk & duster
37	37	55	6	Analysis of CB, CE, CC amplifier using generalised approximate mode	Chalk & duster
38	38	55	6	Multi stage transistor amplifier, R.C. coupled amplifier	Chalk & duster
39	39	55	6	Transformer coupled amplifier	Chalk & duster
40	40	55	6	Feed back in amplifier, General theory of feed back, Negative feedback circuit, Advantage of negative feed back	Chalk & duster
41	41	55	6	Power amplifier and its classification, Difference between voltage amplifier and power amplifier	Chalk & duster
42	42	55	6	Transformer coupled class A power amplifier	Chalk & duster
43	43	55	6	Class A push –pull amplifier, Class B push –pull amplifier	Chalk & duster
44	44	55	6	Oscillators, Types of oscillators, Essentials of transistor oscillator, Principle of operation of tuned collector, Hartley, colpitt,	Audio -visual
45	45	55	6	phase shift ,wein-bridge oscillator (no mathematical derivations)	Chalk & duster
46	46	55	7	Classification of FET	Chalk & duster
47	47	55	7	Advantages of FET over BJT	Chalk & duster
48	48	55	7	FET parameters (no mathematical derivation)	Chalk & duster
49	49	55	7	DC drain resistance, AC drain resistance	Chalk & duster
50	50	55	7	Trans-conductance	Chalk & duster
51	51	55	7	Biasing of FET	Chalk & duster
52	52	55	8	General circuit simple of OP-AMP and IC –CA –741 OP AMP	Chalk & duster
53	53	55	8	Operational amplifier stages, Equivalent circuit of operational amplifier	Chalk & duster
54	54	55	8	Open loop OP-AMP configuration	Chalk & duster
55	55	55	8	OPAMP with fed back, Inverting OP-AMP	Chalk & duster
56	56	55	8	Non inverting OP-AMP, Voltage follower & buffer	Audio -visual
57	57	55	8	Differential amplifier ,	Chalk & duster
58	58	55	8	Adder or summing amplifier, Sub tractor	Chalk & duster
59	59	55	8	Integrator, Differentiator, Comparator	Chalk & duster
60	60	55	8	Revision and questions discussion	Chalk & duster