

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.)
A Govt. Added UGC Autonomous and NAAC Accredited Institute, Affiliated to R.G.P.V, Bhopal

DEPARTMENT OF ELECTRONICS ENGINEERING

Multiple Mode Teaching Learning Pattern

Name of Course with Code: Analog Integrated Circuit (140412)		Class: B. Tech. II Year	Session: Jan-June 2023	
S. No.	Unit	Content to be Covered	Teaching Session	Mode
1.	Unit 1	Introduction of Power Amplifiers	1	Offline & Open discussions
2.		Amplifier classification	2	Offline & activity based learning
3.		Analysis and design of Class A,	3	Offline & Open discussions
4.		Class B, Class AB, class C amplifiers	4-5	Offline & Experiment with problem solving in group based learning
5.		Amplifier Distortion	6	Online & demonstration based learning
6.		Power Transistor	7	Offline & Open discussions
7.		Heat Sinking,	8	Offline & Open discussions
8.		Harmonic distortion	9	Online & demonstration based learning
9.		Push pull amplifiers	10	Online & demonstration based learning
10.		Unit 2	Classification of amplifiers	11
11.	Distortion in amplifiers		12	Offline & problem solving based learning
12.	Frequency response of an amplifier		13	Offline & problem solving based learning
13.	Step response of an amplifier		14	Online & demonstration based learning
14.	Types of coupling		15	Offline & problem solving based learning
15.	Low frequency response of an RC coupled stages		16	Offline & problem solving based learning
16.	Effect of an emitter bypass capacitor on low frequency response		17	Online & demonstration based learning
17.	Two Stage RC coupled Amplifier		18	Online & demonstration based learning
18.		The 555 IC Circuit	19	Offline & Experiment with

				problem solving in group based learning
19.	Unit 3	555 IC block diagram	20	Offline & Experiment with problem solving in group based learning
20.		Using the 555 IC as Astable and Monostable Multivibrator Circuits	21	Online & demonstration based learning
21.		Applications of 555	22	Online & demonstration based learning
22.		Phase Locked Loops	23	Online & demonstration based learning
23.		Phase Detectors	24	Offline & Open discussions
24.		Unit 4	Differential amplifier and analysis	25
25.	Introduction of op-amp		26	Online & demonstration based learning
26.	Block diagram, characteristics and equivalent circuits of an op-amp		27	Offline & Open discussions
27.	Power supply configurations for op-amp, thermal drift		28	Online & demonstration based learning
28.	Effect of variation in power supply voltage		29	Offline & activity based learning
29.	Common-mode rejection ratio (CMRR), Slew rate and its Effect		30	Online & demonstration based learning
30.	Gain bandwidth product, frequency limitations and compensations.		31	Online & demonstration based learning
31.	OP AMP Application circuits such as: Inverting and non-inverting amplifier configurations,		32	Online & demonstration based learning
32.	Summing amplifier, Integrators and differentiators		33	Offline & activity based learning
33.	Schmitt Trigger, Logarithmic and anti-logarithmic amplifier		34	Offline & activity based learning
34.	Review of Unit-IV		35	Online & demonstration based learning
35.	Unit 5	Characteristics of filters	36	Online & demonstration based learning
36.		Classification of filters	37	Offline & activity based learning
37.		Magnitude and frequency response,	38	Online & demonstration based learning
38.		Butterworth 1st and 2nd order Low pass	39	Offline & Experiment with problem solving in group based learning
39.		High pass and band pass filters	40	Offline & Open discussions
40.		Chebyshev filter characteristics	41	Offline & Onsite/ field

				visit based Learning
41.		Band reject filters	42	Offline & Onsite/ field visit based Learning
42.		Notch filter; all pass filters, self-tuned filters.	43	Offline & Open discussions
43.		Review of Unit-V	44	Online & demonstration based learning

Online	Offline						
	Black Board Teaching	Group based Learning	Learning through projects	Learning through demonstration	Learning through experimentation	Activity based Learning	Onsite/field based learning
21%	70%	37%	14%	28%	48.84%	13.95%	9%



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