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 Circuits (140411)		Class: B. Tech. II Year		Session: Jan-June 2023
S. No.	**Unit**	**Content to be Covered**	**Teaching Session**	**Mode**
1.	Unit 1	Introduction and classification of power amplifier, Effect of Q point location on power amplifier	1	Offline & Open discussions
2.		Class A amplifier: efficiency and power dissipation calculation	2	Offline & Open discussions
3.		Harmonic distortion and push pull amplifier	3	Offline & Open discussions
4.		Class B amplifier: efficiency and power dissipation calculation, cross over distortion	4	Offline & Open discussions
5.		Problem based on Class A and Class B amplifier	5	Offline & problem solving based learning
6.		Class AB and Class C amplifier, power transistor Heat sinking	6	Offline & Open discussions
7.	Unit 2	Introduction and classification of multistage amplifier, Frequency response of amplifier and types of coupling	7	Offline & Open discussions
8.		Two stage RC coupled amplifier	8	Offline & Open discussions
9.		Numerical based on two stage RC coupled amplifier	9-11	Offline & problem solving based learning
10.		Direct coupled amplifier and numerical based on it	12-13	Offline & problem solving based learning
11.	Unit 3	Introduction of 555 timer and its internal block diagram.	14	Offline & Open discussions
12.		Detail explanation of Astable multivibrator (AM) and AM using 555 times	15-16	Online & demonstration based learning
13.		Detail explanation of monostable multivibrator using 555 timer	17	Offline & demonstration based learning
14.		VCO, phase detector and Phase locked loop	18	Offline & open discussions
15.		numerical based on it	19	Offline & problem solving based learning
16.		Differential amplifier and analysis, and numerical based on it	20-22	Offline & problem solving based learning

17.	Unit 4	Operational amplifier: Block diagram, basic characteristic and different parameters of OPAMP	23-24	Offline & Open discussions
18.		OP AMP Application circuits	25-30	Online & demonstration based learning
19.	Unit 5	Different passive and active filters	31-32	Offline & Open discussions
20.		Butterworth 1st and 2nd order Low pass, High pass and band pass filters	33	Online & demonstration based learning
21.		Chebyshev filter characteristics, Band reject filters, Notch filter; all pass filters, self-tuned filters	34	Offline & problem solving based learning
22.		Numerical based on it	35	Offline & problem solving 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
25.71%	74.28%	37.21%	13.95%	3.84%	48.84.%	13.95%	-%

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