UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA
Academic Lesson Plan for summer semester- 2024

Name of the teaching faculty: Sarita Bauri **Department: Electrical Engineering**
Semester: 4th **Subject: AE & OP-Amp**
No. of periods per week: 4 **Total Periods: 60**
End semester exam: 80 **IA: 20**
Total Marks: 100

Sl. No.	Week	Period	Unit/Chapter	Topic to be Covered
1.	**1st**	**1st**	P-N JUNCTION DIODE	P-N Junction Diode and its working
2.		**2nd**		V-I characteristic of PN junction Diode
3.		**3rd**		Important terms such as Ideal Diode, Knee voltage
4.		**4th**		Zener breakdown and Avalanche breakdown
5	**2nd**	**1st**		P-N Diode clipping Circuit.
6		**2nd**		P-N Diode clamping Circuit
7		**3rd**	TUTORIAL CUM DOUBT CLEAR CLASS	Objective question related to P-N junction diode
8		**4th**	SPECIAL SEMICONDUCTOR DEVICES	Thermistors
9	**3rd**	**1st**		Zener Diode
10		**2nd**		Tunnel Diode
11.		**3rd**		PIN Diode
12.		**4th**	TUTORIAL CUM DOUBT CLEAR CLASS	Objective question related to special semiconductor devices
13	**4th**	**1st**	RECTIFIER CIRCUITS & FILTERS	Classification of rectifiers
14.		**2nd**		Analysis of half wave rectifiers
15.		**3rd**		Analysis of full center tapped rectifiers
16.		4TH		Analysis of Bridge rectifiers
17.	**5th**	**1st**		Calculation of DC output current and voltage
18.		**2nd**		RMS value, Rectifier efficiency, Ripple factor
19.		**3rd**		Filter
20.		**4th**	TUTORIAL CUM DOUBT CLEAR CLASS	Objective question related to rectifier circuit and filter
21.	**6th**	**1st**	TRANSISTORS	Principle of Bipolar junction transistor
22.		**2nd**		Different modes of operation of transistor
23.		**3rd**		Current components in a transistor
24.		**4th**		Transistor as an amplifier
25.	**7th**	**1st**		Transistor circuit configuration & its characteristics
26.		**2nd**	TUTORIAL CUM DOUBT CLEAR CLASS	Objective question related to Transistor
27.		**3rd**	TRANSISTOR CIRCUITS	Transistor biasing
28.		**4th**		Stabilization and Stability factor
29.	**8th**	**1st**		Different method of Transistors Biasing
30.		**2nd**		Do
31.		**3rd**	TUTORIAL CUM DOUBT CLEAR CLASS	Objective question related to Transistor circuit

32.		4th	TRANSISTOR AMPLIFIERS & OSCILLATORS	Practical circuit of transistor amplifier
33.	9th	1st		DC load line and DC equivalent circuit
34.		2nd		AC load line and AC equivalent circuit
35.		3rd		H-parameters of transistors
36.		4th		Analysis of CB, CE, CC amplifier using generalized approximate model
37.	10th	1st		Multi stage transistor amplifier
38.		2nd		R.C. coupled amplifier and Transformer coupled amplifier
39.		3rd		Feed back in amplifier
40		4th		Power amplifier and its classification
41.	11th	1st		Difference between voltage amplifier and power amplifier
42.		2nd		Class A push – pull amplifier and Class B push – pull amplifier
43.		3rd		Oscillators and Types of oscillators
44.		4th		Principle of operation of different oscillator
45.	12th	1st	TUTORIAL CUM DOUBT CLEAR CLASS	Objective question
46.		2nd	FIELD EFFECT TRANSISTOR	Classification of FET
47.		3rd		Advantages of FET over BJT
48.		4th		Principle of operation of BJT
49.	13th	1st		FET parameters
50.		2nd		DC drain resistance , AC drain resistance and Trans-conductance
51.		3rd		Biasing of FET
52.		4th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective question
53.	14th	1st	OPERATIONAL AMPLIFIERS	General circuit simple of OP-AMP and its amplifier stages
54.		2nd		Equivalent circuit of operational amplifier
55.		3rd		Open loop OP-AMP configuration
56.		4th		OPAMP with fed back 8.6 Inverting OP-AMP and Non inverting OP-AMP
57.	15th	1st		Do
58.		2nd		Differential amplifier
59.		3rd		Do
60.		4th	**TUTORIAL CUM DOUBT CLEAR CLASS**	Objective question

The lesson plan prepared **by the concerned faculty** **Miss Sarita Bauri**

GUEST FACULTY, ELECTRICAL ENGG.