

TITE DIPLOMA,TARABOI,KHURDA**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING****LESSON PLAN**

DISCIPLINE:- ECE				
SEMESTER:- 4th		FROM DATE : 14.02.2023	TO DATE : 23.05.2023	
NAME OF THE TEACHING FACULTY:- SATYA PRAKASH ROUT				
SUBJECT- ANALOG ELECTRONICS & LINEAR IC				
NO.OF PERIOD/PER WEEK CLASS ALLOTTED:- 04				
TOTAL NO. OF CLASS AVAILABLE IN SEM:-				
SL NO.	WEEK	CLASS DATE	NO. OF CLASS/DAY	TOPICS
1	Week-01	16.02.2023	1	Working principle of Diode & its Current equation & Specification and use of p-n junction diode
		17.02.2023	1	Avalanche Diode and its characteristics and Zener Diode and its characteristics
		20.02.2023	1	Half-Wave Rectifier and Full Wave Rectifier and its working principles
		23.02.2023	1	Transistor and its types
2	Week-02	24.02.2023	1	Working principle of p-n-p and n-p-n transistor
		25.02.2023	1	CB Configuration of PNP and NPN Transistor with input and output characteristics
		27.02.2023	1	CE Configuration of PNP and NPN Transistor with input and output characteristics
		02.03.2023	1	CC Configuration of PNP and NPN Transistor with input and output characteristics
3	Week-03	03.03.2023	1	Define ALPHA, BETA and GAMMA of transistors in various modes
		04.03.2023	1	Establish the Mathematical relationship between them.
		06.03.2023	1	Basic concept of Biasing
4	Week-04	09.03.2023	1	Types of Biasing
		10.03.2023	1	h-parameter model of BJT
		11.03.2023	1	Load line (AC &DC) and determine the Q-point.

5	Week-05	13.03.2023	1	Types of Coupling, working principle and use of R-C Coupled Amplifier
		16.03.2023	1	Frequency Responses of R-C coupled Amplifier & draw the curve.
		17.03.2023	1	Classify Power Amplifier, Differentiate between Voltage and Power Amplifier
		18.03.2023	1	Working Principle of Class A Amplifier
6	Week-06	20.03.2023	1	Working Principle of Class AB Amplifier
		23.03.2023	1	Working Principle of Class C Amplifier
		24.03.2023	1	Working Principle of Class D Amplifier
		25.03.2023	1	Construction and working principle and advantages of Push Pull (Class-B) Amplifiers
7	Week-07	27.03.2023	1	FET & its classifications & Differentiate between JFET & BJT.
		31.03.2023	1	Construction, Working principle & characteristics of JEFT
		03.04.2023	1	Explain JEFT as an amplifier, parameters of JFET & Establish relation among JFET parameters.
8	Week-08	06.04.2023	1	Construction & working principle MOSFET
		08.04.2023	1	Classification & Characteristics (Drain & Transfer) of MOSFET
		10.04.2023	1	Explain the operation of CMOS, VMOS and LDMOS
9	Week-09	13.04.2023	1	Define & classify Feedback Amplifier
		15.04.2023	1	Principle of negative feedback with the help of block diagram, Types of feedback – negative & positive feedback
		17.04.2023	1	Voltage Shunt Feedback & Voltage Series Feedback and its diagram, voltage gain and impedance, stability and noise
		20.04.2023	1	Current shunt& current series and characteristics voltage gain, bandwidth , input Impedance output impedance, stability, noise
10	Week-10	21.04.2023	1	Basis of Oscillator, Block diagram of sine wave oscillator, Types Requirement of oscillation and Barkhausen criterion
		22.04.2023	1	RC Oscillator and its operation, LC oscillators – Colpitts , Hartley & Wien Bridge Oscillators :Circuit operation
		24.04.2023	1	LC oscillators – Colpitts , Hartley & Wien Bridge Oscillators : circuit diagram, equation for frequency of oscillation & frequency stability
		25.04.2023	1	Defined and classify Tuned amplifier
11	Week-11	27.04.2023	1	Explain Parallel Resonant circuit, Resonance Curve & sharpness of Resonance
		28.04.2023	1	Working principle of Single tuned Voltage Amplifier and Working principle of Double tuned Voltage Amplifier

		29.04.2023	1	Different type of Non-linear circuits, Clipper, diode series & shunt, positive & negative biased & unbiased combinational clipper clippers circuit & its application
12	Week-12	01.05.2023	1	Different type of Clamper circuit (positive & negative clampers) & its application
		04.05.2023	1	Working of Astable, Monostable & Bistable Multivibrator with circuit diagram
		06.05.2023	1	Working & use of Integrator and Differentiator circuit using R- C circuit (Linear), input / output waveforms & frequency response.
		08.05.2023	1	Differential amplifier & explain its configuration & significance.
13	Week-13	09.05.2023	1	Block diagram representation of a typical Op- Amp, its equivalent circuits and draw the schematic symbol
		11.05.2023	1	Discuss the types of integrated circuits manufacturer's designations of ICs
		12.05.2023	1	Differential amplifier & explain its configuration & significance, Package types, pin identification and temperature and ordering information.
14	Week-14	13.05.2023	1	Define the following electrical characteristics input offset voltage, input offset current, CMRR, Large signal voltage gain, Slew rate
		15.05.2023	1	Draw and explain the Open Loop configuration (inverting, non-inverting Amplifier)
		16.05.2023	1	Discussion on the summing scaling and averaging of inverting and non-inverting amplifiers
15	Week-15	18.05.2023	1	Derivation of the close loop Voltage gain, gain of feedback circuits input resistance, and output resistance, bandwidth and total output offset voltage with feedback.
		20.05.2023	1	Draw the circuit diagram of the voltage shunt feedback amplifier
		22.05.2023	1	Derivation of the close loop Voltage gain, gain of feedback circuits input resistance, and output resistance, bandwidth and total output offset voltage with feedback.
		23.05.2023	1	Discuss the summing scaling and averaging of inverting and non-inverting amplifiers
16	Week-16	25.05.2023	1	Draw the circuit diagram of the voltage shunt feedback amplifier
		26.07.2023	1	DC & AC Amplifiers using OP-AMP & Integrator and Differentiator using Op-Amp
		27.05.2023	1	Active filter and Describe the filter design of first order low Pass Butterworth
		29.05.2023	1	Concept of Zero-Crossing Detector using Op-Amp