LESSON PLAN-2021-22 (SUMMER-2022)		
DISCIPLINE-ETC	**Semester- 4th**	**Name of teaching faculty-ER. ASHOK KUMAR PRUSTY**
SUBJECT-AEC	**No of days per week class alloted-5**	**SEM From date- 14/03/2022 No of weeks-16**
Week	**Class day**	**Theory Topics**
3RD	14.03.2022	Working principle, of Diode & its current equation, Specification anduse of p-n junction diode.
	15.03.2022	Breakdown of diode (Avlance&Zener Breakdown) and Construction, working, Characteristics
	16.03.2022	Classification of Rectifiers and working of different types of Rectifiers-Half-Wave Rectifier, Full-Wave Rectifier (CT & BRIDGE type)
	17.03.2022	Classification of Do Rectifiers and
4TH	21.03.2022	Working principle of p-n-p and n-p-n transistor, different types of transistor connection (CB, CE and CC)& input and output characteristics of transistor in different connections.
	22.03.2022	Define ALPHA, BETA and GAMMA of transistors in various modes. Establish the Mathematical relationship between them.
	23.03.2022	Basic concept of Biasing, Types of Biasing,h-parameter model of BJT,load line (AC &DC) and determine the Q-point.
	24.03.2022	Basic Concept of Do Biasing, Types of
	26.03.2022	Types of Coupling, working principle and use of R-C Coupled Amplifier & Frequency Responses of R-C coupled Amplifier & draw the curve.
5TH	28.03.2022	Types of Coupling. Do working priciple.
	29.03.2022	AUDIO POWER AMPLIFIERS:Classify Power Amplifier &Differentiate between Voltage and Power Amplifier
	30.03.2022	AUDIO POWER AMPLIFIERDos : Classify power
	31.03.2022	AUDIO POWER AMPLIFIEDoRS:- Classify power
2ND	04.04.2022	Working principle of different types of Power Amplifier (Class-A, Class-AB, Class-B and Class-C & Class D amplifier).
	05.04.2022	Working priciple Do of different types
	06.04.2022	Working principle Do of different types
	07.04.2022	Construction and working principle and advantages of Push Pull (Class-B) Amplifiers
3RD	11.04.2022	FIELD EFFECT TRANSISTOR (FET) ,FET & its classifications &Differentiate between JFET & BJT
	12.04.2022	Construction, working principle & characteristics of JEFT &Explain JEFT as an amplifier, parameters of JFET & Establish relation among JFET parameters.
	13.04.2022	Construction, working Do principle &

	14.04.2022	Construction & working principle MOSFET & its classification & characteristics (Drain & Transfer)
	16.04.2022	Explain the operation of CMOS, VMOS & LDMOS
4TH	18.04.2022	FEED BACK AMPLIFIER & OSCILLATOR : Define & classify Feedback Amplifier, principle of negative feedback with the help of block diagram, Types of feedback – negative &positive feedback.
	19.04.2022	Types of negative feedback – voltage shunt, voltage series, current shunt& current series and characteristics voltage gain, bandwidth , input Impedance output impedance, stability, noise , distortion in
	20.04.2022	Types of negative Do feedback - voltage
	21.04.2022	Oscillator -block diagram of sine wave oscillator ,Types Requirement of oscillationBarkhausen criterion
	23.04.2022	RC oscillators – RC phase shift ,Crystal, LC oscillators – Colpitts , Hartley & Wien Bridge Oscillators :Circuit operation, circuit diagram, equation for frequency of oscillation & frequency stability
5TH	25.04.2022	TUNED AMPLIFIER & WAVE SHAPING CIRCUIT: Defined and classify Tuned amplifier, Explain parallel Resonant circuit, Resonance Curve & sharpness of Resonance
	26.04.2022	working principle of Single tuned Voltage& Double tuned Amplifier & its limitation
	27.04.2022	Different type of Non-linear circuits - Clipper, diode series &shunt, positive& negative biased & unbiased and combinational clipper clippers circuit & its application.
	28.04.2022	Different type of Do Non-linear circuits.
	30.04.2022	Different type of Clamper circuit (positive & negative clampers) & its application
1ST	02.05.2022	Working of Astable, Monostable & BistableMultivibrator with circuit diagram.
	04.05.2022	Working& use of Integrator and Differentiator circuit using R- C circuit(Linear), input / output waveforms & frequency response.
	05.05.2022	OPERATIONAL AMPLIFIER CIRCUITS & FEEDBACK CONFIGURATIONS : Differential amplifier & explain its configuration &significance.
	07.05.2022	Block diagram representation of a typical Op- Amp, its equivalent circuits and draw the schematic symbol
2ND	09.05.2022	Discuss the types of integrated circuits manufacturer's designations of ICs, Package types, pin identification and temperature and ordering information.
	10.05.2022	Define the following electrical characteristics input offset voltage, input offset current, CMMR, Large signal voltage gain, Slew rate .
	11.05.2022	Draw and explain the Open Loop configuration (inverting, non-inverting Amplifier)

	12.05.2022	Draw the circuit diagram of the voltage series feedback amplifier and derive the close loop Voltage gain, gain of feedback circuits input resistance, and output resistance, bandwidth and total output offset voltage with feedback
	14.05.2022	Drew the circuit Do diagram of the
3RD	16.05.2022	APPLICATION OF OPERATIONAL AMPLIFIER, TIMER CIRCUITS& IC voltage regulator : Discuss the summing scaling and averaging of inverting and non-inverting amplifiers
	17.05.2022	APPLICATION OF Do OPERATIONAL
	18.05.2022	DC & AC Amplifies using OP-AMP.
	19.05.2022	Integrator and differentiator using op-amp
	21.05.2022	Active filter and describe the filter design of fast order low Pass Butterworth
4TH	23.05.2022	Active filter and Do describe the
	24.05.2022	Concept of Zero-Crossing Detector using Op-Amp
	25.05.2022	Concept of zero- Do Crossing Detector
	26.05.2022	Block diagram and operation of IC 555 timer &IC 565 PLL& its applications
	28.05.2022	Block diagram and Do operation of
5TH	30.05.2022	Working of Current to voltage Convertor using Operational Amplifier
	31.05.2022	Working of current Do to voltage
1ST	01.06.2022	Working of the Voltage to Frequency Convertor using Operational Amplifier
	02.06.2022	Working of the Do Voltage to
	04.06.2022	Working of the Frequency to Voltage Conversion using Operational Amplifier.
2ND	06.06.2022	Working of the Do frequency to
	07.06.2022	Operation of power supply using 78XX and 79XX,LM 317 Series with their PIN configuration
	08.06.2022	Operation of power Do supply using 78XX
	09.06.2022	Functional block diagram & Working of IC regulator LM 723 & LM 317.
	11.06.2022	Functional block Do diagram & working

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