



LESSON PLAN, SESSION-SUMMER-2024
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

DISCIPLINE- ETC ENGG.	SEMISTER- 4TH	NEME OF THE FACULTY-ER. ASHOK KUMAR PRUSTY
SUBJECT- AEC	NO OF CLASS ALLOTTED/WEEK-5	SEMESTER FROM- 16.01.2024 TO 26.04.2024
WEEK	DATE	TOPICS
3RD	16.01.2024	DIODE, TRANSISTORS AND CIRCUITS (INSTRUCTION)
	17.01.2024	Working principle, of Diode & its current equation, Specification and use of p-n junction diode
	19.01.2024	Breakdown of diode (Avance&Zener Breakdown) and Construction, working, Characteristics
	20.01.2024	Classification of Rectifiers and working of different types of Rectifiers- Half-Wave Rectifier, Full-Wave Rectifier (CT & BRIDGE type)
4TH	22.01.2024	Classification of Rectifiers and working of different types of Rectifiers- Half-Wave Rectifier, Full-Wave Rectifier (CT & BRIDGE type)
	23.01.2024	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
	24.01.2024	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
	25.01.2024	Define ALPHA, BETA and GAMMA of transistors in various modes. Establish the Mathematical relationship between them.
	27.01.2024	Define ALPHA, BETA and GAMMA of transistors in various modes. Establish the Mathematical relationship between them.
5TH	29.01.2024	Basic concept of Biasing, Types of Biasing, h-parameter model of BJT, load line (AC & DC) and determine the Q-point.
	30.01.2024	Types of Coupling, working principle and use of R-C Coupled Amplifier & Frequency Responses of R-C coupled Amplifier & draw the curve.
	31.01.2024	AUDIO POWER AMPLIFIERS. (INSTRUCTION)
1ST	02.02.2024	Classify Power Amplifier & Differentiate between Voltage and Power Amplifier.
	03.02.2024	Classify Power Amplifier & Differentiate between Voltage and Power Amplifier.
2ND	05.02.2024	Working principle of different types of Power Amplifier (Class-A, Class-AB, Class-B and Class-C & Class D amplifier).
	06.02.2024	Working principle of different types of Power Amplifier (Class-A, Class-AB, Class-B and Class-C & Class D amplifier).
	07.02.2024	Working principle of different types of Power Amplifier (Class-A, Class-AB, Class-B and Class-C & Class D amplifier).
	09.02.2024	Construction and working principle and advantages of Push Pull (Class-B) Amplifiers
	10.02.2024	Construction and working principle and advantages of Push Pull (Class-B) Amplifiers
	12.02.2024	FIELD EFFECT TRANSISTOR (FET).(INSTRUCTION)

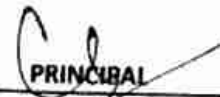
3RD	13.02.2024	FET & its classifications & Differentiate between JFET & BJT.
	14.02.2024	FET & its classifications & Differentiate between JFET & BJT.
	16.02.2024	Construction, working principle & characteristics of JFET & Explain JFET as an amplifier, parameters of JFET & Establish relation among JFET parameters.
	17.02.2024	Construction, working principle & characteristics of JFET & Explain JFET as an amplifier, parameters of JFET & Establish relation among JFET parameters.
4TH	19.02.2024	Construction, working principle & characteristics of JFET & Explain JFET as an amplifier, parameters of JFET & Establish relation among JFET parameters.
	20.02.2024	Construction & working principle MOSFET & its classification & characteristics (Drain & Transfer)
	21.02.2024	Construction & working principle MOSFET & its classification & characteristics (Drain & Transfer)
	23.02.2024	Explain the operation of CMOS, VMOS & LDMOS.
	24.02.2024	REVISION
5TH	26.02.2024	FEED BACK AMPLIFIER & OSCILLATOR (INSTRUCTION)
	27.02.2024	Define & classify Feedback Amplifier, principle of negative feedback with the help of block diagram, Types of feedback – negative & positive feedback
	28.02.2024	Define & classify Feedback Amplifier, principle of negative feedback with the help of block diagram, Types of feedback – negative & positive feedback
1ST	01.03.2024	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 amplifiers.
	02.03.2024	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 amplifiers.
2ND	04.03.2024	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 amplifiers.
	05.03.2024	Oscillator -block diagram of sine wave oscillator, Types Requirement of oscillation Barkhau
	06.03.2024	RC oscillators – RC phase shift, Crystal, LC oscillators – Colpitts, Hartley & Wien Bridge Oscillators :Circuit operation, circuit diagram, equation for frequency of oscillation & frequency stability
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3RD	11.03.2024	TUNED AMPLIFIER & WAVE SHAPING CIRCUIT (INSTRUCTION)
	12.03.2024	Defined and classify Tuned amplifier, Explain parallel Resonant circuit, Resonance Curve & sharpness of Resonance.
	13.03.2024	Defined and classify Tuned amplifier, Explain parallel Resonant circuit, Resonance Curve & sharpness of Resonance.
	15.03.2024	working principle of Single tuned Voltage & Double tuned Amplifier & its limitation
	16.03.2024	working principle of Single tuned Voltage & Double tuned Amplifier & its limitation
4TH	18.03.2024	Different type of Non-linear circuits - Clipper, diode series & shunt, positive & negative biased & unbiased and combinational clipper clippers circuit & its application.
	19.03.2024	Different type of Non-linear circuits - Clipper, diode series & shunt, positive & negative biased & unbiased and combinational clipper clippers circuit & its application.
	20.03.2024	REVISION
	22.03.2024	CLASS TEST

	23.03.2024	Different type of Clamper circuit (positive & negative clampers) & its application.
5TH	25.03.2024	Working of Astable, Monostable & Bistable Multivibrator with circuit diagram.
	27.03.2024	Working of Astable, Monostable & Bistable Multivibrator with circuit diagram.
	29.03.2024	Working & use of Integrator and Differentiator circuit using R- C circuit (Linear), input / output waveforms & frequency response.
	30.03.2024	Working & use of Integrator and Differentiator circuit using R- C circuit (Linear), input / output waveforms & frequency response.
1ST	02.04.2024	OPERATIONAL AMPLIFIER CIRCUITS & FEEDBACK CONFIGURATIONS
	03.04.2024	Differential amplifier & explain its configuration & significance.
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	06.04.2024	Block diagram representation of a typical Op- Amp, its equivalent circuits and draw the schematic symbol
2ND	08.04.2024	Block diagram representation of a typical Op- Amp, its equivalent circuits and draw the schematic symbol
	09.04.2024	Discuss the types of integrated circuits manufacturer's designations of ICs, Package types, pin identification and temperature and ordering information.
	10.04.2024	Discuss the types of integrated circuits manufacturer's designations of ICs, Package types, pin identification and temperature and ordering information.
	12.04.2024	Define the following electrical characteristics input offset voltage, input offset current, CMRR, Large signal voltage gain, Slew rate .
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3RD	15.04.2024	Draw and explain the Open Loop configuration (inverting, non-inverting Amplifier)
	16.04.2024	Draw and explain the Open Loop configuration (inverting, non-inverting Amplifier)
	17.04.2024	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.
	19.04.2024	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.
	20.04.2024	Draw the circuit diagram of the voltage shunt feedback amplifier and derive the close loop, Voltage gain, gain of feedback circuits and input resistance, and output resistance, bandwidth and total output offset voltage with feedback
4TH	21.04.2024	Draw the circuit diagram of the voltage shunt feedback amplifier and derive the close loop, Voltage gain, gain of feedback circuits and input resistance, and output resistance, bandwidth and total output offset voltage with feedback
	23.04.2024	REVISION
	24.04.2024	APPLICATION OF OPERATIONAL AMPLIFIER, TIMER CIRCUITS & IC voltage regulator
	26.04.2024	Discuss the summing scaling and averaging of inverting and non-inverting amplifiers
	27.04.2024	DC & AC Amplifies using OP-AMP.
5TH	29.04.2024	Integrator and differentiator using op-amp.
	30.04.2024	Active filter and describe the filter design of fast order low Pass Butterworth
1ST	01.05.2024	Concept of Zero-Crossing Detector using Op-Amp
	03.05.2024	Block diagram and operation of IC 555 timer & IC 565 PLL & its applications
	04.05.2024	Working of Current to voltage Converter using Operational Amplifier

2ND	06.05.2024	Working of the Voltage to Frequency Convertor using Operational Amplifier
	07.05.2024	Working of the Frequency to Voltage Conversion using Operational Amplifier.
	08.05.2024	Operation of power supply using 78XX and 79XX, LM 317 Series with their PIN configuration
	10.05.2024	Operation of power supply using 78XX and 79XX, LM 317 Series with their PIN configuration
	11.05.2024	Functional block diagram & Working of IC regulator LM 723 & LM 317.


H. O. D.


DEAN(ACADEMIES)


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