

Badriprasad Institute of Technology, Sambalpur

Lesson plan for Theory -4, ANALOG ELECTRONICS & LINEAR IC

Semester & Branch : 4TH SEM, ETC Engineering

Total Periods-75

Name of the faculty : MRS. SWETANJALI NAYAK

No of periods /week-5

WEEK	CLASS DAY	THEORY
1ST	1ST	WORKING PRINCIPLE OF DIODE & ITS CURRENT EQUATION
	2ND	SPECIFICATION AND USE OF PN DIODE
	3RD	BREAKDOWN OF DIODE & CONSTRUCTION, WORKING, CHARACTERISTICS
	4TH	CLASSIFICATION OF RECTIFIERS & WORKING OF DIFFERENT TYPES OF RECTIFIERS
	5TH	WORKING PRINCIPLE OF PNP & NPN TRANSISTOR, DIFFERENT TYPES OF TRANSISTOR CONNECTION
2ND	1ST	DEFINE ALPHA, BETA & GAMMA OF TRANSISTOR IN VARIOUS MODES
	2ND	BASIC CONCEPT OF BIASING, TYPES OF BIASING, H-PARAMETER
	3RD	LOAD LINE, Q-POINT
	4TH	TYPES OF COUPLING, RC COUPLED AMPLIFIER
	5TH	FREQUENCY RESPONSE OF RC COUPLED AMPLIFIER
3RD	1ST	CLASSIFY POWER AMPLIFIER& DIFFERENTIATE BETWEEN VOLTAGE & POWER AMPLIFIER
	2ND	WORKING PRINCIPLE OF DIFFERENT TYPES OF POWER AMPLIFIER
	3RD	CONSTRUCTION AND WORKING PRINCIPLE OF PUSH PULL AMPLIFIER
	4TH	FET & ITS CLASSIFICATION
	5TH	DIFFERENTIATE BETWEEN JFET & BJT
4TH	1ST	CONSTRUCTION, WORKING PRINCIPLE OF JFET
	2ND	CHARACTERISTICS JFET, JFET AS AN AMPLIFIER
	3RD	ESTABLISH RELATION BETWEEN JFET PRAMETERS
	4TH	CONSTRUCTION AND WORKING MOSFET
	5TH	CLASSIFICATION OF MOSFET, ITS CHARACTERISTICS
5TH	1ST	EXPLAIN THE OPERATION OF CMOS
	2ND	OPERATION OF VMOS
	3RD	OPERATION OF LDMOS
	4TH	DEFINE & CLASSIFY FEEDBACK AMPLIFIER, PRINCIPLE OF NEGATIVE FEEDBACK
	5TH	TYPES OF FEEDBACK
6TH	1ST	TYPES OF NEGATIVE FEEDBACK
	2ND	CHARACTERISTICS OF VOLTAGE GAIN, BANDWIDTH, INPUT IMPEDANCE OUTPUT IMPEDANCE, STABILITY, NOISE, DISTORTION
	3RD	BLOCK DIAGRAM OF SINE WAVE OSCILLATOR
	4TH	TYPES & REQUIREMENT OF OSCILLATION, BARKHHAUSEN CRITERION
	5TH	RC PHASE SHIFT OSCILLATOR, LC OSCILLATORS
7TH	1ST	COLPITT'S OSCILLTOR, HARTLEY OSCILLATOR
	2ND	WEIN BRIDGE OSCILLATOR
	3RD	DEFINE & CLASSIFY TUNED AMPLIFIER
	4TH	PARALLEL RESONANT CIRCUIT, RESONANCE CURVE, SHARPNESS OF RESONANCE
	5TH	WORKING PRINCIPLE OF SINGLE TUNED VOLTAGE & DOUBLE TUNED AMPLIFIER
8TH	1ST	DIFFERENT TYPES OF NON LINEAR CIRCUIT
	2ND	COMBINATIONAL CLIPPER & ITS APPLICATION
	3RD	POSITIVE CLAMPER CIRCUIT & APPLICATION
	4TH	NEGATIVE CLAMPER CIRCUIT & APPLICATION
	5TH	WORKING OF ASTABLE, MONOSTABLE, BISTABLE MULTIVIBRATOR
9TH	1ST	WORKING & USE OF INTEGRATOR CIRCUIT USING RC CIRCUIT
	2ND	WORKING & USE OF DIFFERENTIATOR CIRCUIT
	3RD	DIFFERENTIAL AMPLIFIER & ITS CONFIGURATION, SIGNIFICANCE

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	4TH	BLOCK DIAGRAM & REPRESENTATION OF OP-AMP
	5TH	EQUIVALENT CIRCUIT OF OPAMP, SYMBOL
10TH	1ST	TYPES OF INTEGRATED CIRCUITS, PACKAGE TYPES
	2ND	PIN IDENTIFICATION, TEMPERATURE & ORDERING INFORMATION
	3RD	INPUT OFFSET VOLTAGE & CURRENT, CMRR, LARGE SIGNAL VOLTAGE GAIN, SLEW RATE
	4TH	DRAW & EXPLAIN OPEN LOOP CONFIGURATION
	5TH	EXPLAIN VOLTAGE SERIES FEEDBACK AMPLIFIER
11TH	1ST	DERIVE CLOSED LOOP VOLTAGE GAIN, GAIN OF FEEDBACK CIRCUITS
	2ND	INPUT & OUTPUT RESISTANCE, BANDWIDTH, OUTPUT OFFSET VOLTAGE WITH FEEDBACK
	3RD	EXPLAIN VOLTAGE SHUNT FEEDBACK AMPLIFIER
	4TH	DERIVE CLOSED LOOP VOLTAGE GAIN, GAIN OF FEEDBACK CIRCUITS
	5TH	INPUT RESISTANCE & OUTPUT RESISTANCE, BANDWIDTH, TOTAL OUTPUT OFFSET VOLTAGE WITH FEEDBACK
12TH	1ST	DISCUSS SUMMING SCALING & AVERAGING OF INVERTING & NON INVERTING AMPLIFIER
	2ND	DC & AC AMPLIFIERS USING OP-AMP
	3RD	INTEGRATOR USING OP-AMP
	4TH	DIFFERENTIATOR USING OP-AMP
	5TH	EXPLAIN ACTIVE FILTER & ITS DESIGN
13TH	1ST	CONCEPT OF ZERO CROSSING DETECTOR
	2ND	BLOCK DIAGRAM & OPERATION OF IC 555 TIMER & IC 565 PLL
	3RD	WORKING OF CURRENT TO VOLTAGE CONVERTOR
	4TH	WORKING OF VOLTAGE TO FREQUENCY CONVERTOR
	5TH	WORKING OF FREQUENCY TO VOLTAGE CONVERSION USING OP-AMP
14TH	1ST	OPERATION OF POWER SUPPLY USING 78XX & 79XX
	2ND	LM 317 SERIES WITH THEIR PIN CONFIGURATION
	3RD	FUNCTIONAL BLOCK DIAGRAM OF IC REGULATOR LM 723 & LM 317
	4TH	WORKING OF IC REGULATOR LM 723 & LM 317
	5TH	OBJECTIVE TYPE QUESTION DISCUSSION
15TH	1ST	OBJECTIVE TYPE QUESTION DISCUSSION
	2ND	SEMESTER PATTERN QUESTION DISCUSSION
	3RD	SEMESTER PATTERN QUESTION DISCUSSION
	4TH	PRACTICE TEST-1
	5TH	PRACTICE TEST-2

Sign of Faculty

Sign of HOD