

ORISSA SCHOOL OF ENGINEERING & POLYTECHNIC**ELECTRONICS AND TELECOMMUNICATION PROGRAMME****LESSON PLAN FOR THE SESSION 2023-24****SUBJECT- ANALOG AND DIGITAL COMMUNICATION****BRANCH-E&TC ENGG.****NAME OF THE FACULTY-SIBA PRASAD PANDA****SEMESTER-5TH**

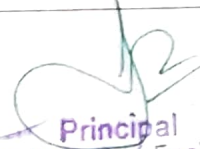
UNIT	DATE	LECTURE NO.	TOPIC TO BE COVERED
1	01/08/2023	1	Communication process- elements of communication system & its block diagram
	03/08/2023	2	Source of information & communication channels
	04/08/2023	3	Classification of communication systems(line & wireless or radio)
	05/08/2023	4	Modulation, need of modulation and classify modulation process
	07/08/2023	5	Analog and digital signals & its conversion
	08/08/2023	6	Basic concept of signals & signals classification (analog and digital)
	10/08/2023	7	limitation of communication system (bandwidth limitation)
2	11/08/2023	8	Amplitude modulation & derive the expression for amplitude modulation signal
	12/08/2023	9	Modulation index
	14/08/2023	10	Power relation in AM wave
	17/08/2023	11	Generation of amplitude modulation(AM)
	18/08/2023	12	Collector modulation method
	19/08/2023	13	Demodulation of AM waves(square law detector)
	21/08/2023	14	Linear diode detector
	22/08/2023	15	PLL demodulator
	24/08/2023	16	DSB-SC signal, SSB signal
	25/08/2023	17	Methods of generating SSB-SC signal
	26/08/2023	18	Method of detection of SSB-SC signal
	28/08/2023	19	Generation of DSB-SC signal (balanced modulator)
	29/08/2023	20	Ring modulator
	31/08/2023	21	Synchronous detection of DSB-SC
	01/09/2023	22	Vestigial Side Band modulation
3	02/09/2023	23	Concept of angle modulation & its types (PM & FM), expression for frequency modulated signal
	04/09/2023	24	Modulation index and side band of FM signal, frequency spectrum of FM signal
	05/09/2023	25	Phase Modulation & difference of FM & PM
	07/09/2023	26	Compare between AM and FM modulation (advantages & disadvantages)

	08/09/2023	27	Methods of FM generation(indirect(Armstrong)method only)
	09/09/2023	28	Methods of fm demodulator or detector (Forster-Seely detector)
	11/09/2023	29	Ratio detector
4	12/09/2023	30	Classification of radio receivers, define the terms selectivity, sensitivity, fidelity and noise figure
	14/09/2023	31	AM transmitter-working principle with block diagram
	15/09/2023	32	Concept of frequency conversion, RF amplifier & IF amplifier, tuning, S/N ratio
	16/09/2023	33	Working of super-heterodyne radio receiver with block diagram
	18/09/2023	34	Working of FM transmitter
	22/09/2023	35	Working of FM receiver
	23/09/2023	36	Concept of sampling theorem, nyquist rate & aliasing
5	25/09/2023	37	Sampling techniques (instantaneous, natural, flat top)
	26/09/2023	38	Analog pulse modulation – generation and detection of PAM signal
	28/09/2023	39	Generation and detection of PWM signal
	29/09/2023	40	Generation and detection of PPM signal
	30/09/2023	41	Comparison of PAM, PWM and PPM
	03/10/2023	42	Concept of quantization of signal & quantization error
	05/10/2023	43	Generation, transmission path of PCM system with block diagram
	06/10/2023	44	Demodulation of PCM system with block diagram & its application
	07/10/2023	45	Companding in PCM
	09/10/2023	46	Vocoder
	10/10/2023	47	Time Division Multiplexing & explain the operation with circuit diagram
	12/10/2023	48	Generation & demodulation of DPCM with block diagram
	13/10/2023	49	Generation & demodulation of Delta modulation with block diagram
	14/10/2023	50	Advantages and disadvantages of delta modulation,
	16/10/2023	51	Comparison between PCM, DM, ADM & DPCM
	17/10/2023	52	Solve the small problems
6	19/10/2023	53	Concept of multiplexing, FDM transmitter and receiver
	20/10/2023	54	Digital modulation formats, advantages of digital communication system over analog system
	30/10/2023	55	Digital modulation techniques & types, generation of ASK
	31/10/2023	56	Detection of binary ASK and generation of BPSK
	02/11/2023	57	Detection of binary PSK
	03/11/2023	58	Generation and detection of binary FSK
	04/11/2023	59	QPSK and its generation
	06/11/2023	60	Class test question discussion & distribution of evaluated answer sheet to the student for their references
	07/11/2023	61	Detection of QPSK
	09/11/2023	62	Generation and detection of QAM
	10/11/2023	63	Generation and detection of MSK
	11/11/2023	64	Generation and detection of GMSK
	13/11/2023	65	Working of T1-carrier system

14/11/2023	66	Spread spectrum & its applications
16/11/2023	67	Working of spread spectrum modulation techniques (DS-SS)
17/11/2023	68	Working of spread spectrum modulation techniques (FH-SS)
18/11/2023	69	Define bit, baud, symbol & channel capacity formula.(Shannon theorems), application of different modulation schemes
20/11/2023	70	Types of modem & its application
21/11/2023	71	Discussion of assignment question
23/11/2023	72	Previous semester question discussion
24/11/2023	73	Previous semester question discussion
25/11/2023	74	OMR test
28/11/2023	75	Class test question discussion & distribution of evaluated answer sheet to the student for their references

Sibaprasad panda .


H.O.D., E.T.C. Dept.
O.S.E., Berhampur


Principal
Orissa School of Engineering
Berhampur (Gm.)