LESSON PLAN-2021-22 (WINTER-2021)
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

DISCIPLINE-ETC	Semester-5TH	Name of teaching faculty-ER. PRAKASH BEURA
SUBJECT-ADC	No of days/ per week class alloted-4	SEM From date- 01/10/2021 No of weeks-16
Week	**Class day**	**Theory Topics**
1ST	01.10.21	Communication Process- Concept of Elements of Communication System & its Block diagram
2ND	02.10.21	Source of information & Communication Channels.
	04.10.21	Classification of Communication systems (Line & Wireless or Radio)
	06.10.21	Modulation Process, Need of modulation and classify modulation process
	07.10.21	Analog and Digital Signals & its conversion.
	08.10.21	Basic concept of Signals & Signals classification (Analog and Digital)
	09.10.21	Bandwidth limitation
3RD	11.10.21	Amplitude modulation & derive the expression for amplitude modulation signal, power relation in AM wave & find Modulation Index.
	12.10.21 to 20.10.21	DUSSERA Amplitude modulation & derive the expression
4TH	21.10.21	Generation of Amplitude Modulation(AM)- Linear level AM modulation only
	22.10.21	Demodulation of AM waves (liner diode detector, square law detector & PLL)
	23.10.21	Explain SSB signal and DSBSC signal
5TH	25.10.21	Methods of generating & detection SSB-SC signal (Indirect method only)
	27.10.21	Methods of generation DSB-SC signal (Ring Modulator) and detection of DSB-SC signal (Synchronous detection)
	28.10.21	Concept of Balanced modulators
	29.10.21	Vestigial Side Band Modulation
	30.10.21	Concept of Angle modulation & its types (PM & FM)
1ST	01.11.21	Basic principle of Frequency Modulation & Frequency Spectrum of FM Signal.
	03.11.21	Expression for Frequency Modulated Signal & Modulation Index and sideband of FM signal
	05.11.21	Explain Phase modulation & difference of FM & PM)- working principle with Block Diagram
	06.11.21	Compare between AM and FM modulation (Advantages & Disadvantages)
2ND	08.11.21	Methods of FM Generation (Indirect (Armstrong) method only) working principle with Block Diagram
	10.11.21	Methods of FM Demodulator or detector (Forster-Seely & Ratio detector)- working principle with Block Diagram
	11.11.21	Classification of Radio Receivers
	12.11.21	Define the terms Selectivity, Sensitivity, Fidelity and Noise Figure
	13.11.21	AM transmitter - working principle with Block Diagram
3RD	15.11.21	Concept of Frequency conversion, RF amplifier & IF amplifier ,Tuning, S/N ratio
	17.11.21	Working of super heterodyne radio receiver with Block diagram
	18.11.21	Working of FM Transmitter & Receiver with Block Diagram.
	20.11.21	Concept of Sampling Theorem , Nyquist rate & Aliasing
4TH	22.11.21	Sampling Techniques (Instantaneous, Natural, Flat Top)
	24.11.21	Analog Pulse Modulation - Generation and detection
	25.11.21	Generation and detection of PAM
	26.11.21	Generation and detection of PWM
	27.11.21	Generation and detection of PPM
5TH	29.11.21	Concept of Quantization of signal & Quantization error.
1ST	01.12.21	Generation & Demodulation of PCM system with Block diagram & its applications.
	02.12.21	Companding in PCM & Vocoder
	03.12.21	Time Division Multiplexing & explain the operation with circuit diagram.
	04.12.21	Generation & demodulation of Delta modulation with Block diagram.

	06.12.21	Generation & demodulation of DPCM with Block diagram.
	08.12.21	Comparison between PCM, DM , ADM & DPCM
	09.12.21	Concept of Multiplexing (FDM & TDM)- (Basic concept , Transmitter & Receiver) & Digital modulation formats.
	10.12.21	Advantages of digital communication system over Analog system
	11.12.21	Digital modulation techniques & types.
3RD	13.12.21	Generation and Detection of binary ASK
	15.12.21	Generation and Detection of binary FSK
	16.12.21	Generation and Detection of binary PSK
	17.12.21	Generation and Detection of binary QPSK
	18.12.21	Generation and Detection of binary QAM
4TH	20.12.21	Generation and Detection of binary MSK
	22.12.21	Generation and Detection of binary GMSK
	23.12.21	Working of T1-Carrier system.
	24.12.21	Spread Spectrum & its applications
5TH	27.12.21	Working operation of Spread Spectrum Modulation Techniques (DS-SS & FH-SS).
	29.12.21	Define bit, Baud, symbol & channel capacity formula.(Shannon Theorems)
	30.12.21	Application of Different Modulation Schemes.
	31.12.21	Types of Modem & its Application

KP

H.O.D.

H.O.D
ETC Engineering
S V S.E T., Madanpur

PRINCIPAL

PRINCIPAL
Swami Vivekananda School of Engg. & Te
Madanpur, BBSR