LESSON PLAN, SESSION-WINTER-2023-2024
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

DISCIPLINE-E.T.C. ENGG.	SEMESTER- 5TH	NAME OF THE FACULTY - ER. ASHOK KUMAR PRUSTY
SUBJECT - ADC	NO. OF CLASSES ALOTTED/WEEK - 5	SEMESTER FROM - 01.08.2023 TO 30.11.23

WEEK	DATE	TOPICS COVERED
1ST	01.08.23	**Elements of Communication Systems.**
	02.08.23	Communication Process- Concept of Elements of Communication System & its Block diagram
	03.08.23	Communication Process- Concept of Elements of Communication System & its Block diagram
	05.08.23	Source of information & Communication Channels
2ND	07.08.23	Classification of Communication systems (Line & Wireless or Radio)
	08.08.23	Modulation Process, Need of modulation and classify modulation process
	09.08.23	Modulation Process, Need of modulation and classify modulation process
	10.08.23	Analog and Digital Signals & its conversion
	12.08.23	Basic concept of Signals & Signals classification (Analog and Digital)
3RD	14.08.23	Basic concept of Signals & Signals classification (Analog and Digital)
	16.08.23	Bandwidth limitation
	17.08.23	**Amplitude (linear) Modulation Syste**
	19.08.23	Amplitude modulation & derive the expression for amplitude modulation signal, power relation in AM wave & find Modulation Index.
4TH	21.08.23	Amplitude modulation & derive the expression for amplitude modulation signal, power relation in AM wave & find Modulation Index.
	22.08.23	Generation of Amplitude Modulation(AM)- Linear level AM modulation only
	23.08.23	Generation of Amplitude Modulation(AM)- Linear level AM modulation only
	24.08.23	Demodulation of AM waves (liner diode detector, square law detector & PLL)
	26.08.23	Demodulation of AM waves (liner diode detector, square law detector & PLL)
5TH	28.08.23	Explain SSB signal and DSBSC sign
	29.08.23	Explain SSB signal and DSBSC sign
	30.08.23	Methods of generating & detection SSB-SC signal (Indirect method only)
	31.08.23	Methods of generation DSB-SC signal (Ring Modulator) and detection of DSB-SC signal (Synchronous detection
1ST	02.09.23	Concept of Balanced modulators
2ND	04.09.23	Vestigial Side Band Modulatio
	05.09.23	Revision
	06.09.23	**Angle Modulation Systems.**
	07.09.23	Concept of Angle modulation & its types (PM & FM)
	09.09.23	Concept of Angle modulation & its types (PM & FM)
3RD	11.09.23	Basic principle of Frequency Modulation & Frequency Spectrum of FM Signal.
	12.09.23	Basic principle of Frequency Modulation & Frequency Spectrum of FM Signal.
	13.09.23	Expression for Frequency Modulated Signal & Modulation Index and sideband of FM signal
	14.09.23	Expression for Frequency Modulated Signal & Modulation Index and sideband of FM signal
	16.09.23	Explain Phase modulation & difference of FM & PM)- working principle with Block Diagram
	18.09.23	Explain Phase modulation & difference of FM & PM)- working principle with Block Diagram
	20.09.23	Compare between AM and FM modulation (Advantages & Disadvantages

4TH	21.09.23	Methods of FM Generation (Indirect (Armstrong) method only) working principle with Block Diagram
	23.09.23	Methods of FM Generation (Indirect (Armstrong) method only) working principle with Block Diagram
5TH	25.09.23	Methods of FM Demodulator or detector (Forster-Seely & Ratio detector)- working principle with Block Diagram
	26.09.23	Methods of FM Demodulator or detector (Forster-Seely & Ratio detector)- working principle with Block Diagram
	27.09.23	**AM & FM TRANSMITTER & RECEIVER**
	28.09.23	Classification of Radio Receivers
	30.09.23	Classification of Radio Receivers
1ST	03.10.23	Define the terms Selectivity, Sensitivity, Fidelity and Noise Figure
	04.10.23	Define the terms Selectivity, Sensitivity, Fidelity and Noise Figure
	05.10.23	REVISON
	07.10.23	CLASS TEST
2ND	09.10.23	AM transmitter - working principle with Block Diagram
	10.10.23	Concept of Frequency conversion, RF amplifier & IF amplifier ,Tuning, S/N ratio
	11.10.23	Concept of Frequency conversion, RF amplifier & IF amplifier ,Tuning, S/N ratio
	12.10.23	Working of super heterodyne radio receiver with Block diagram
3RD	16.10.23	INTERNAL
	17.10.23	INTERNAL
	18.10.23	INTERNAL
	19.10.23	INTERNAL
4TH	1.10.23 TO 28.10.2	PUJA HOLIDAYS
5TH	30.10.23	Working of FM Transmitter & Receiver with Block Diagram.
	31.10.23	**ANALOG TO DIGITAL CONVERSION & PULSE MODULATION SYSTEM.**
1ST	01.11.23	Concept of Sampling Theorem , Nyquist rate & Aliasin
	02.11.23	Sampling Techniques (Instantaneous, Natural, Flat Top
	04.11.23	Analog Pulse Modulation - Generation and detection of PAM, PWM & PPM system with the help of Block diagram & comparison of all above.
2ND	06.11.23	Analog Pulse Modulation - Generation and detection of PAM, PWM & PPM system with the help of Block diagram & comparison of all above.
	07.11.23	Concept of Quantization of signal & Quantization error.
	08.11.23	Generation & Demodulation of PCM system with Block diagram & its applications
	09.11.23	Companding in PCM & Vocoder
	11.11.23	Time Division Multiplexing & explain the operation with circuit diagram.
3RD	13.11.23	Generation & demodulation of Delta modulation with Block diagram.
	14.11.23	Generation & demodulation of DPCM with Block diagram.
	15.11.23	Comparison between PCM, DM , ADM & DPCM
	16.11.23	**DIGITALMODULATION TECHNIQUES**
	18.11.23	Concept of Multiplexing (FDM & TDM)- (Basic concept , Transmitter & Receiver) & Digital modulation format
4TH	20.11.23	Advantages of digital communication system over Analog syste
	21.11.23	Digital modulation techniques & types
	22.11.23	Generation and Detection of binary ASK, FSK, PSK, QPSK, QAM, MSK, GMSK
	23.11.23	Working of T1-Carrier system.
	25.11.23	Spread Spectrum & its applications
5TH	27.11.23	Working operation of Spread Spectrum Modulation Techniques (DS-SS & FH-SS). Define bit, Baud, symbol & channel capacity formula.(Shannon Theorems)
	28.11.23	Application of Different Modulation Schemes.
	29.11.23	Types of Modem & its Application
	30.11.23	REVISON

H.O.D

DEAN(ACADEMICS)

PRINCIPAL

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ETC Engineering
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