PNS SCHOOL OF ENGINEERING & TECHNOLOGY,MARSHAGHAI,KENDR4APARA DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION		
		NAME OF THE FACULTY
BRANCH -ETC	SEIVIESTER-05	ER.AMARENDRA SAHOO
Th.4 WAVE PROPAGATION & BROADBAND COMMUNICATION ENGINEERING	NO. OF DAYS PER WEEK CLASS ALLOTTED : 05	SEMESTER FROM DT-01.08.2023-30-11-2023
WEEK-01		Unit-1: WAVE PROPAGATION & ANTENNA
		1.2 Classification based on Modes of Propagation-
		Definition – critical frequency, max. useable frequency,
		Troposphere scatter propagation actual height and
		Definition - Antenna gains, Directive gain, Directivity,
	Unit-1:	polarization, input impedance, efficiency, Radiator
	WAVE PROPAGATION & ANTENNA	Antenna -types of antenna: Mono pole
WEEK-02		dipole antenna and omni directional antenna
		Operation of following antenna with advantage &
		a) Directional high frequency antenna : . Yagi
WEEK-03		Rohmbus only UHF & Microwave antenna.: Dish antenna
		Horn antenna Basic Concepts of Smart Antennas-
		REVISION & DOUBT CLEARING
	Unit-2: TRANSMISSION LINES.	Unit-2: TRANSMISSION LINES.
		2.2 Equivalent circuit of transmission line & RF
		2.3 Characteristics impedance,
		methods of
WEEK-04		2.4 Losses in transmission line
		2.5 Standing wave – SWR, VSWR, Reflection coefficient,
		2.6 Quarter wave & half wavelength line
WEEK-05		2.7 Impedance matching & Stubs – single & double
		2.8 Primary & secondary constant of X-mission line.
		REVISION & DOUBT CLEARING
	Unit-3: TELEVISION ENGINEERING	Unit-3: TELEVISION ENGINEERING
		Video bandwidth, Interlaced
WEEK-06		3.2 TV Transmitter – Block diagram & function of each
		3.3 Monochrome TV Receiver -Block diagram & function
		3.4 Colour TV signals (Luminance Signa
		Chrominance Signal. (1 & Q.U & V Signals).
		3.5 Types of Televisions by Technology- cathode-ray
WEEK-07		s, Plasma Display Panels, Digital Light
		,Liquid Crystal Display (LCD),Organic Light-Emitting
		3.6 Discuss the principle of operation - LCD displayLarge
		3.7 CATV systems & Types & networks 3.8 Digital TV
		Transmission of digital TV signals
		Digital TV receiver Video
		Unit-4: MICROWAVE ENGINEERING.
WEEK-08		4.2 Operation of rectangular wave gives and its

1		
WEEK-09	1	4.3 Propagation of EM wave through wave guide with TE
	Unit-4: MICROWAVE ENGINEERING.	4.4 Circular wave guide
		4.5 Operational Cavity resonator.
		4.6 Working of Directional coupler
		4.7 Microwave tubes-Principle of operational of two
WEEK-10		4.7 Microwave tubes-Principle of operational of
		4.8 Principle of Operations of Travelling Wave Tubes
		4.9 Principle of Operations of Cyclotron
		4.9 Principle of Operations of Cyclotron
		4.10 Principle of Operations of Tunnel Diode
		Gunn diode
WEEK-11		REVISION & DOUBT CLEARING
		Unit-5: Broadband communication
		Network architecture
		5.2 Cable broadband data network- architecture,
WEEK-12		importance & future of broadband telecommunication
	Unit-5:	SONET(Synchronous Optical Network)-Signal frame
	Broadband communication	advantages applications, and disadvantages
		ISDN - ISDN Devices interfaces, services, Architecture,
		BISDN -interfaces & Terminals, protocol architecture
		REVISION & DOUBT CLEARING
		REVISION & DOUBT CLEARING
Biob		Ano-
SIGN.OF H.O.D.		SIGN OF THE FACULTY