

LESSONPLAN-2022-2023

DISCIPLINE:ETC	SEMESTER:5TH	NAMEOF THETEACHINGFACULTY:SRI SATYANARAYAN PANIGRAHI
SUBJECT:WAVE PROPAGATION & BROADBAND COMMUNICATION ENGINEERING	NO.OF DAYS/PER WEEKCLASSALLOTTED:4	SEMESTER FROM DATE: 15/09/22 TO DATE: 22/12/2022 NO.OF WEEKS:15
WEEK	CLASSDAY	THEORY/PRACTICALTOPICS
1ST	1ST	WAVE PROPAGATION, ANTENNA
	2ND	REFLECTION,REFRACTION,DIFFRACTION,INTERFERENC E,ABSORPTION,ATTENUATION .
	3RD	MODES OF PROPAGATION
	4TH	CRITICAL FREQUENCY,MAXIMUM USABLE FREQUENCY,SKIP DISTANCE,FADING
2ND	1ST	DUCT PROPAGATION , TROPOSPHERE SCATTER PROPAGATION, ACTUAL HEIGHT, VIRTUAL HEIGHT.
	2ND	ANTENNA GAIN, DIRECTIVE GAIN,DIRECTIVITY,
	3RD	EFFECTIVE APERATURE,POLARIZATION,INPUT IMPEDANCE,EFFICIENCY,RADIATOR RESISTANCE,BANDWIDTH,BEAMWIDTH.
	4TH	TYPES OF ANTENNA-MONOPOLE,DIPOLE,OMNI DIRECTIONAL ANTENNA.
3RD	1ST	YAGI, RHOMBUS ANTENNA.
	2ND	DISH ANTENNA, HORN ANTENNA
	3RD	SMART ANTENNA.
	4TH	FUNDAMENTALS OF TRANSMISSION LINE
4TH	1ST	CHARACTERISTIC IMPEDANCE,NUMERICALS.
	2ND	LOSSES IN TRANSMISSION LINE.
	3RD	SWR,VSWR,REFLECTION COEFFICIENT,NUMERICALS
	4TH	QUARTER WAVE,HALF WAVELENGTH LINE.
5TH	1ST	IMPEDANCE MATCHING, SINGLE & DOUBLE STUB MATCHING.
	2ND	TV ENGINEERING,ASPECT RATIO,RECTANGULAR SWITCHING,FLICKER, COMPOSITE VIDEO SIGNAL
	3RD	TV TRANSMITTER BLOCK DIAGRAMS
	4TH	MONOCHROME TV RECEIVER BLOCK DIAGRAM
6TH	1ST	COLOR TV SIGNALS
	2ND	TYPES OF TELEVISIONS – LCD,OLED,QLED.
	3RD	CATV SYSTEMS
	4TH	DIGITAL TV TECHNOLOGY
7TH	1ST	MICROWAVE WAVEGUIDES
	2ND	RECTANGULAR WAVEGUIDES & ITS ADVANTAGES
	3RD	TE & TM MODES IN RECTANGULAR WAVEGUIDE
	4TH	CIRCULAR WAVE GUIDE
8TH	1ST	OPERATION OF CAVITY RESONATOR
	2ND	WORKING OF DIRECTIONAL COUPLER
	3RD	WORKING OF ISOLATORS
	4TH	WORKING OF CIRCULATORS
9TH	1ST	WORKING OF 2 CAVITY KLYSTRON

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	2ND	WORKING OF TWT
	3RD	TWT DETAILS
	4TH	OPERATION OF TUNNEL DIODE
10TH	1ST	OPERATION OF GUNN DIODE
	2ND	OPERATION OF CYCLOTRON
	3RD	CONTINUED OF TUNNEL DIODE, GUNN DIODE
	4TH	CONTINUED OF CYCLOTRON.
11TH	1ST	CONTINUED OF TWT , NUMERICALS
	2ND	BROADBAND COMMUNICATION
	3RD	FUNDAMENTAL OF COMPONENTS, NETWORK ARCHITECTURE
	4TH	CABLE BROADBAND DATA NETWORK
12TH	1ST	ARCHITECTURE, IMPORTANCE, FUTURE OF BROADBAND TELECOMMUNICATION INTERNET BASED NETWORK.
	2ND	SONET
	3RD	SIGNAL FRAME COMPONENTS TOPOLOGIES
	4TH	ADVANTAGES, APPLICATIONS, DISADVANTAGES
13TH	1ST	ISDN
	2ND	ISDN DEVICE INTERFACES
	3RD	ISDN SERVICES, ARCHITECTURE, APPLICATIONS
	4TH	BISDN
14TH	1ST	BISDN INTERFACES & TERMINALS
	2ND	BISDN PROTOCOL
	3RD	BISDN ARCHITECTURE
	4TH	BISDN APPLICATIONS
15TH	1ST	TRANSMISSION LINE NUMERICALS
	2ND	ANTENNA NUMERICALS
	3RD	WAVEGUIDE NUMERICALS
	4TH	WAVE PROPAGATION NUMERICALS.