



LESSON PLAN, SESSION-WINTER-2023-24
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

DISCIPLIN E-ETC ENGG.	SEMISTER- 5TH	NEME OF THE FACULTY-ER. ASHOK KUMAR PRUSTY
SUBJECT- WPBC	NO OF CLASS ALLOTTED/WEEK-4	SEMESTER FROM-01.08.2023 TO 30.11.2023.
WEEK	DATE	TOPICS
1ST	01.08.23	WAVE PROPAGATION & ANTENN
	02.08.23	Effects of environments such as reflection, refraction, interference, diffraction, absorption and attenuation (Definition only)
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2ND	07.08.23	Classification based on Modes of Propagation-Ground wave, Ionosphere ,Sky wave propagation, Space wave propagatio
	08.08.23	Classification based on Modes of Propagation-Ground wave, Ionosphere ,Sky wave propagation, Space wave propagatio
	09.08.23	Definition – critical frequency, max. useable frequency, skip distance, fading, Duct propagation & Troposphere scatter propagation actual height and virtual height
	10.08.23	Definition – critical frequency, max. useable frequency, skip distance, fading, Duct propagation & Troposphere scatter propagation actual height and virtual height
3RD	14.08.23	Radiation mechanism of an antenna-Maxwell equation.
	16.08.23	Definition - Antenna gains, Directive gain, Directivity, effective aperture, polarization, input impedance, efficiency, Radiator resistance, Bandwidth, Beam width, Radiation pattern
	17.08.23	Definition - Antenna gains, Directive gain, Directivity, effective aperture, polarization, input impedance, efficiency, Radiator resistance, Bandwidth, Beam width, Radiation pattern
4TH	21.08.23	Antenna -types of antenna: Mono pole and dipole antenna and omni directional antenna
	22.08.23	Antenna -types of antenna: Mono pole and dipole antenna and omni directional antenna
	23.08.23	Operation of following antenna with advantage & applications. a) Directional high frequency antenna : , Yagi & Rohmbus onl
	24.08.23	b) UHF & Microwave antenna.: Dish antenna (with parabolic reflector) & Horn antenna
5TH	28.08.23	Basic Concepts of Smart Antennas- Concept and benefits of smart antennas
	29.08.23	TRANSMISSION LINES.
	30.08.23	Fundamentals of transmission line.
	31.08.23	Equivalent circuit of transmission line & RF equivalent circuit
2ND	04.09.23	Characteristics impedance, methods of calculations & simple numerical
	05.09.23	Characteristics impedance, methods of calculations & simple numerical
	06.09.23	Losses in transmission line
	07.09.23	Standing wave – SWR, VSWR, Reflection coefficient, simple numerical
3RD	11.09.23	Standing wave – SWR, VSWR, Reflection coefficient, simple numerical
	12.09.23	Quarter wave & half wavelength line
	13.09.23	Impedance matching & Stubs – single & double
	14.09.23	Primary & secondary constant of X-mission line.
	18.09.23	TELEVISION ENGINEERING

4TH	20.09.23	Define-Aspect ratio, Rectangular Switching, Flicker, Horizontal Resolution, Video bandwidth, Interlaced scanning, Composite video signal, Synchronization pulses
	21.09.23	Define-Aspect ratio, Rectangular Switching, Flicker, Horizontal Resolution, Video bandwidth, Interlaced scanning, Composite video signal, Synchronization pulses
5TH	25.09.23	TV Transmitter – Block diagram & function of each block.
	26.09.23	Monochrome TV Receiver -Block diagram & function of each block
	27.09.23	Colour TV signals (Luminance Signal & Chrominance Signal,(I & Q,U & V Signals).
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1ST	02.10.23	Types of Televisions by Technology- cathode-ray tube TVs, Plasma Display Panels, Digital Light Processing (DLP),Liquid Crystal Display (LCD),Organic Light-Emitting Diode
	03.10.23	REVISION
	04.10.23	CLASS TEST
	05.10.23	Discuss the principle of operation - LCD display, Large Screen Display.
2ND	09.10.23	CATV systems & Types & networks
	10.10.23	Digital TV Technology-Digital TV Signals, Transmission of digital TV signals & Digital TV receiver Video programme processor unit
	11.10.23	Digital TV Technology-Digital TV Signals, Transmission of digital TV signals & Digital TV receiver Video programme processor unit
	12.10.23	MICROWAVE ENGINEERING.
3RD	16.10.23	INTERNAL
	17.10.23	INTERNAL
	18.10.23	INTERNAL
	19.10.23	INTERNAL
4TH	21.10.23 TO 28.10.	PUJA HOLIDAYS
5TH	30.10.23	Define Microwave Wave Guides
	31.10.23	Operation of rectangular wave guides and its advantage.
1ST	01.11.23	Propagation of EM wave through wave guide with TE & TM mode
	02.11.23	Propagation of EM wave through wave guide with TE & TM mode
2ND	06.11.23	Circular wave guide.
	07.11.23	Operational Cavity resonator.
	08.11.23	Working of Directional coupler, Isolators & Circulator.
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3RD	13.11.23	Microwave tubes-Principle of operation of two Cavity Klystron.
	14.11.23	Principle of Operations of Travelling Wave Tubes
	15.11.23	Principle of Operations of Travelling Wave Tubes
	16.11.23	Principle of Operations of Cyclotron
4TH	20.11.23	Principle of Operations of Tunnel Diode & Gunn diode
	21.11.23	Broadband communication
	22.11.23	Broadband communication system-Fundamental of Components and Network architecture
	23.11.23	Cable broadband data network- architecture, importance & future of broadband telecommunication internet based network
5TH	27.11.23	SONET(Synchronous Optical Network)-Signal frame components topologies advantages applications, and disadvantages
	28.11.23	ISDN - ISDN Devices interfaces, services, Architecture, applications,
	29.11.23	BISDN -interfaces & Terminals, protocol architecture applications
	30.11.23	REVISION


H. O. D.


DEAN(ACADEMICS)


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