

PNS SCHOOL OF ENGINEERING & TECHNOLOGY

MARSHAGHAI, KENDRAPARA

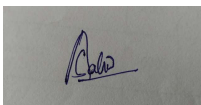
LESSON PLAN

SESSION-(2024-2025)

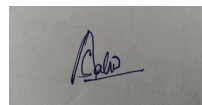
BRANCH: ELECTRONICS & TELECOMMUNICATION

BRANCH: ELECTRONICS & TELE COMMUNICATION	SUBJECT: Th.1- ADVANCE COMMUNICATION ON ENGINEERING	NAME OF THE FACULTY : ER. AMARENDRA SAHOO HOD, ETC 6th SEMESTER FROM DATE : 04.02.2025 TO 17.05.2025 NO. OF WEEKS : 14
WEEK	DAY	THEORY
1	1ST	1. RADAR & NAVIGATION AIDS
	2ND	Working principle of Simple Radar system, its types
	3RD	Radar range equation & Performance factor of radar.
	4TH	Working principle of Pulsed Radar system.
	5th	Function of radar indication and Working principle of moving target
	6TH	Define Doppler effect & Working principle of C.W Radar.
2	1ST	DOUBT CLEARING/SHORT QUESTION
	2nd	Radar aids to Navigation
	3rd	Aircraft landing system.
	4TH	Navigation Satellite System.(NAVSAT) & GPS System
	5TH	2. SATELLITE COMMUNICATION
	6TH	Concept of Geostationary Satellite, calculate its height, velocity &
3	1ST	DOUBT CLEARING/SHORT QUESTION
	2ND	Working of the Satellite sub system
	3RD	General structure of satellite Link system (Uplink, Down
	4TH	Working principle of direct broadcast system (DBS)
	5TH	Working principle of VSAT system.
	6TH	Define multiple accessing & name various types.
4	1ST	Time Division Multiple Accessing(TDMA) & Code Division
	2ND	Multiple Accessing (CDMA) – block diagram, its advantages
	3RD	DOUBT CLEARING/SHORT QUESTION
	4TH	Satellite Application- Communication Satellite(MSAT), Digital
	5TH	Working principle of GPS Receiver & Transmitter &
	6TH	2.13 Optical Satellite Link transmitter & Receiver
5	1ST	3. OPTICAL FIBER COMMUNICATION.
	2ND	Compare the advantage and disadvantage of optical
	3RD	Electromagnetic Frequency and wave line spectrum
	4TH	Optical fiber construction
	5TH	Acceptance angle numerical aperture
	6TH	DOUBT CLEARING/SHORT QUESTION
6	1ST	Optical fibre communication system- block diagram &
	2ND	3.8 Modes of propagation and index profile of optical fiber
	3RD	Types optical fiber configuration: Single-mode step index, Multi-
	4TH	Multi-mode Graded index
	5TH	Attenuation in optical fibers – Absorption losses, scattering, losses,
	6TH	losses, bending losses, core and cladding losses- Dispersion
	1ST	Dispersion, waveguide dispersion, Intermodal dispersion

7	2ND	Optical sources(Transmitter) & types – LED- semiconductor laser
	3RD	LASER -its working principles, block diagram using laser feedback
	4TH	Optical detectors – PIN and APD diodes
	5TH	Block diagram using
	6TH	Optical repeater & Single Channel system
	8	1ST
2ND		3.16 Concept of Wave Length Division Multiplexing (WDM)
3RD		4. TELECOMMUNICATION SYSTEM
4TH		Function of switching system.& Call procedures
5TH		Space and time switching.
6TH		Numbering plan of telephone networks (National Schemes &
9	1ST	Working principle of a PBX & Digital EPABX.
	2ND	Working principle of Internet Protocol Telephone
		Working principle of Internet Telephone
	3RD	5. Data Communication
	4TH	Architecture, Protocols and Standards
	5TH	Data Communication Circuits
10	6TH	Types of Transmission & Transmission Modes
	1ST	Data Communication codes
	2ND	MODEM & its basic block diagram& common features Voice Band
	3RD	6. WIRELESS COMMUNICATION
	4TH	f co-channel Interference and system capacity of a Cellular Radio
	5TH	Concept of improving coverage and capacity in cellular system (Cell
11	6TH	Wireless Systems and its Standards.
	1ST	Discuss the GSM (Global System for Mobile) service and features.
	2ND	Architecture of GSM system & GSM mobile station &channel types
	3RD	working of forward and reveres CDMA channel,the frequency and
	4TH	Architecture and features of GPRS.
	5TH	Discuss the mobile TCP, IP protocol.
12	6TH	Working of Wireless Application Protocol (WAP).
	1ST	Features of SMS, MMS, 1G,2G, 3G, 4G& 5G Wireless
	2ND	3G, 4G& 5G Wireless
	3RD	Smart Phone and discuss its features indicate through
	4TH	DOUBT CLEARING/SHORT QUESTION/REVISION
	5TH	DOUBT CLEARING/SHORT QUESTION/REVISION



SIGN.OF LECTURE



SIGN.OF HOD