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

DISCIPLINE-ETC ENGG.	SEMESTER- 6TH	NEME OF THE FACULTY-ER. ASHOK KUMAR PRUSTY
SUBJECT-ADC	NO OF CLASS ALLOTED/WEEK-5	SEMESTER FROM- 16.01.2024 TO 26.04.2024
WEEK	DATE	TOPICS
3RD	16.01.2024	RADAR & NAVIGATION AIDS.
	17.01.2024	Basic Radar, advantages & applications
	18.01.2024	Working principle of Simple Radar system , its types
	19.01.2024	Radar range equation &Performance factor of radar.
4TH	22.01.2024	Working principle of Pulsed Radar system.
	23.01.2024	Function of radar indication and Working principle of moving target indicator
	24.01.2024	Define Doppler effect&Working principle of C.W Radar.
	25.01.2024	Radar aids to Navigation
5TH	29.01.2024	MTI Radar- working principle
	30.01.2024	Aircraft landing system.
	31.01.2024	Navigation Satellite System.(NAVSAT) & GPS System
1ST	01.02.2024	SATELLITE COMMUNICATION
	02.02.2024	Basic Satellite Transponder & Kepler's Laws
2ND	05.02.2024	Satellite Orbital patterns and elevation(LEO,MEO & GEO) categories
	06.02.2024	Concept of Geostationary Satellite, calculate its height, velocity & round trip time delay & their advantage & disadvantage
	07.02.2024	Working of the Satellite sub system
	08.02.2024	Satellite frequency allocation and frequency bands.
	09.02.2024	General structure of satellite Link system (Uplink, Down link, Transponder, Crosslink)
3RD	12.02.2024	Working principle of direct broadcast system (DBS)
	13.02.2024	Working principle of VSAT system
	14.02.2024	Define multiple accessing & name various types.
	15.02.2024	Time Division Multiple Accessing(TDMA) & Code Division Multiple Accessing (CDMA) – block diagram, its advantages & dis-advantages
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4TH	19.02.2024	Satellite Application- Communication Satellite(MSAT), Digital Satellite Radio.
	20.02.2024	Satellite Application- Communication Satellite(MSAT), Digital Satellite Radio.
	21.02.2024	Working principle of GPS Receiver & Transmitter& applications.
	22.02.2024	Optical Satellite Link transmitter & Receiver
	23.02.2024	REVISION
	26.02.2024	OPTICAL FIBER COMMUNICATION.

5TH	27.02.2024	Basic principle of Optical communication.
	28.02.2024	Compare the advantage and disadvantage of optical fibres&metallic cables
	29.02.2024	Electromagnetic Frequency and wave line spectrum
1ST	01.03.2024	Types of optical fibres&principles of propogation in a fibre using Ray Theory
2ND	04.03.2024	Optical fiber construction
	05.03.2024	Define terms: Velocity of propagation, Critical angle, Acceptance angle numericalaperture
	06.03.2024	Optical fibre communication system- block diagram & working principle
	07.03.2024	Modes of propagation and index profile of optical fiber
3RD	11.03.2024	Types optical fiber configuration: Single-mode step index, Multi-mode step index, Multi-mode Graded index
	12.03.2024	Attenuation in optical fibers – Absorption losses, scattering, losses, bending losses, core and cladding losses- Dispersion – material Dispersion, waveguide dispersion, Intermodal dispersion
	13.03.2024	Optical sources(Transmitter) & types – LED- semiconductor laser diodes
	14.03.2024	LASER -its working principles, block diagram using laser feedback control circuit
	15.03.2024	Optical detectors – PIN and APD diodes &Block diagram using APDConnectors and splices –Optical cables - Couplers
4TH	18.03.2024	Optical repeater & Single Channel system
	19.03.2024	Applications of optical fibres – civil, Industry and Military application
	20.03.2024	Concept of Wave Length Division Multiplexing (WDM) principles.
	21.03.2024	REVISION
	22.03.2024	CLASS TEST
5TH	25.03.2024	TELECOMMUNICATION SYSTEM
	27.03.2024	Working of Electronic Telephone System. (Telephone Set)
	28.03.2024	Function of switching system.& Call procedures
	29.03.2024	Space and time switching.
1ST	02.04.2024	Numbering plan of telephone networks (National Schemes & International Numbering)
	03.04.2024	Numbering plan of telephone networks (National Schemes & International Numbering)
	04.04.2024	Working principle of a PBX & Digital EPABX
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2ND	08.04.2024	Units of Power Measurement.
	09.04.2024	Working principle of Internet Protocol Telephone
	10.04.2024	Working principle of Internet Telephone
	11.04.2024	Working principle of Internet Telephone
	12.04.2024	REVISION
3RD	15.04.2024	Data Communication
	16.04.2024	Basic concept of Data Communication
	17.04.2024	Architecture, Protocols and Standards
	18.04.2024	Data Communication Circuits

	19.04.2024	Types of Transmission & Transmission Modes
4TH	22.04.2024	Data Communication codes
	23.04.2024	Basic idea of Error control & Error Detection
	24.04.2024	MODEM & its basic block diagram& common features Voice Band Modem
	25.04.2024	WIRELESS COMMUNICATION
	26.04.2024	Basic concept of Cell Phone,frequency reuse channel assignment strategic handoff co-channel Interference and system capacity of a Cellular Radio systems.
5TH	29.04.2024	Concept of improving coverage and capacity in cellular system (Cell Splitting, Sectoring)
	30.04.2024	Wireless Systems and its Standards.
1ST	01.05.2024	Discuss the GSM (Global System for Mobile) service and features.
	02.05.2024	Architecture of GSM system & GSM mobile station &channel types of GSM system.
	03.05.2024	working of forward and reveres CDMA channel,the frequency and channel specifications
2ND	06.03.2024	Architecture and features of GPRS.
	07.03.2024	Discuss the mobile TCP, IP protocol.
	08.03.2024	Working of Wireless Application Protocol (WAP).
	09.03.2024	Features of SMS, MMS, 1G,2G, 3G, 4G& 5G Wireless network.
	10.03.2024	Smart Phone and discuss its features indicate through Block diagram.

H. O. D.

DEAN(ACADEMICS)

PRINCIPAL

H.O.D
ETC Engineering
S V.S E . T., Mandanpur

PRINCIPAL
Swami Vivekananda School of Engg. & Tech
Madanpur,BBSR