

Government Polytechnic Nawada(Bihar)

(Department of Electronics Engineering)

Lecture Plan

Name of the Faculty	PRATEEK PRASAD VIDYARTHI				
Email-id and Mobile number	prateekvidyarthi128@gmail.com , 8471043599				
Semester/Branch	5 th / Electronics Engg.				
Subject Name(Subject Code)	Radio & Telecommunication System (1621503)				
Lecture/Week	3 Periods/Week = 3 hrs per week				
Theory					
Units	Week	Lecture Day	Topics	Methods of Teaching	Remarks
Unit 1 ELEMENTS OF COMMUNICATIONS	1	1	Basics of Communication & Modulation.	PPT/Video/Hand written notes(PDF)	
		2	Radio Transmitters and Block Diagram.	PPT/Video/Hand written notes(PDF)	
		3	Operation and Performance of AM & FM Transmitters.	PPT/Video/Hand written notes(PDF)	
	2	1	Mixers and Converters.	PPT/Video/Hand written notes(PDF)	
		2	Principle of Heterodyning.	PPT/Video/Hand written notes(PDF)	
		3	Assignment on Elements of Communications.	PDF/Google form	
Unit 2 RADIO RECEIVER	3	1	Block Diagram of AM Radio Receivers.	PPT/Video/Hand written notes(PDF)	
		2	Block Diagram of FM Radio Receivers.	PPT/Video/Hand written notes(PDF)	
		3	Different Stages i.e. RF Section, IF Stage, Local Oscillator, Mixer.	PPT/Video/Hand written notes(PDF)	
	4	1	Different Stages i.e. Tuning, Band Selection and Switch, Volume Control.	PPT/Video/Hand written notes(PDF)	
		2	Principle of Operation.	PPT/Video/Hand written notes(PDF)	
		3	Assignment on Radio Receiver.	PDF/Google form	

UNIT 3 PROPAGATION OF WAVES	5	1	Introduction to various modes of Propagation.	PPT/Video/Hand written notes(PDF)	
		2	Ground Wave Propagation.	PPT/Video/Hand written notes(PDF)	
		3	Space wave propagation.	PPT/Video/Hand written notes(PDF)	
	6	1	Tropospheric wave propagation & Refraction by tropospheric wave.	PPT/Video/Hand written notes(PDF)	
		2	Tilt of Surface wave, Introduction of Sky wave propagation and Ionospheric propagation.	PPT/Video/Hand written notes(PDF)	
		3	Characteristics of Ionosphere, Critical frequency & Maximum Usable frequency.	PPT/Video/Hand written notes(PDF)	
	7	1	Virtual Height and SKIP Distance.	PPT/Video/Hand written notes(PDF)	
		2	Tropospheric Scattering System.	PPT/Video/Hand written notes(PDF)	
		3	Assignment on Propagation of Waves.	PDF/Google form	
	Unit 4 ANTENNA	8	1	Introduction to Antenna.	PPT/Video/Hand written notes(PDF)
2			General equation for field of a point source.	PPT/Video/Hand written notes(PDF)	
3			Field Pattern and Phase Pattern.	PPT/Video/Hand written notes(PDF)	
9		1	Gain and Directivity of Antenna.	PPT/Video/Hand written notes(PDF)	
		2	Radiation intensity and other parameters of Antenna.	PPT/Video/Hand written notes(PDF)	
		3	Introduction to working principle of Helical antenna, Biconical Antenna.	PPT/Video/Hand written notes(PDF)	
10		1	Introduction to working principle of Horn antenna, Lens antenna.	PPT/Video/Hand written notes(PDF)	
		2	Introduction to working principle of Long wire, Yagi type of Antennas	PPT/Video/Hand written notes(PDF)	
		3	Assignment on Antenna.	PDF/Google form	

Unit 5 RADAR AND NAVIGATION AIDS	11	1	Elements of RADAR System.	PPT/Video/Hand written notes(PDF)	
		2	Radar Equation.	PPT/Video/Hand written notes(PDF)	
		3	Radar Transmitting System.	PPT/Video/Hand written notes(PDF)	
	12	1	Radar antenna and Scanning.	PPT/Video/Hand written notes(PDF)	
		2	Duplexer.	PPT/Video/Hand written notes(PDF)	
		3	Radar Receiver.	PPT/Video/Hand written notes(PDF)	
	13	1	Moving Target Indicator.	PPT/Video/Hand written notes(PDF)	
		2	Radar range and Beacons.	PPT/Video/Hand written notes(PDF)	
		3	Assignment on Radar and Navigation Aids.	PDF/Google form	
Unit 6 SATELLITE COMMUNICATION	14	1	Introduction and Need of satellite.	PPT/Video/Hand written notes(PDF)	
		2	Low orbiting satellites and Geo stationary satellite.	PPT/Video/Hand written notes(PDF)	
		3	Choice of frequency bands.	PPT/Video/Hand written notes(PDF)	
	15	1	Satellite broadcasting.	PPT/Video/Hand written notes(PDF)	
		2	Remote sensing: Basic Principle.	PPT/Video/Hand written notes(PDF)	
		3	Assignment on Satellite Communication.	PDF/Google form	
Unit 7 ANALOG TRANSMISSION	16	1	DC Signalling, AC Signalling and Bandwidth	PPT/Video/Hand written notes(PDF)	
		2	Transmission media and Modems.	PPT/Video/Hand written notes(PDF)	
		3	Attenuators and Repeaters.	PPT/Video/Hand written notes(PDF)	
	17	1	Assignment on Analog Transmission.	PDF/Google form	
		2	Digital Channels and PCM.	PPT/Video/Hand written notes(PDF)	
		3	Optical Fibre Transmission Systems.	PPT/Video/Hand written notes(PDF)	

Unit 8 DIGITAL TRANSMISSION	18	1	ISDN Services & Applications.	PPT/Video/Hand written notes(PDF)	
		2	Broad Band Networks.	PPT/Video/Hand written notes(PDF)	
		3	Assignment on Digital Transmission.	PDF/Google form	
Unit 9 SWITCHING	19	1	Introduction to Switching Systems and Strowger switching system.	PPT/Video/Hand written notes(PDF)	
		2	Crossbar switching and Electronic space division switching.	PPT/Video/Hand written notes(PDF)	
		3	Switch digitisation and transmission, Time division switching.	PPT/Video/Hand written notes(PDF)	
	20	1	Optical fibre systems and Traffic Engineering.	PPT/Video/Hand written notes(PDF)	
		2	Telephone Networks and Data networks.	PPT/Video/Hand written notes(PDF)	
		3	Assignment on Switching.	PDF/Google form	
Total		60			