Lession Plan

Name of Faculty : Guest Faculty 2
Discipline : Computer Engg.
Semester : 3rd
Subject : Data Communications
Lession Plan Duration : 15 Weeks (from July-2018 to Nov-2018
Work Load (Lecture / Practical) per Week (in h) : Lecture - 3 Practical - 6

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1"	1st	**1. Introduction:-** Data Communication- Components	1st	
	2nd	Data representation	2nd	
	3rd	Data flow Networks- Distributed processing	3rd	
2"	4th	Network criteria	4th	
	5th	Physical structures	5th	
	6th	Network Category- LAN, WAN, MAN	6th	
3"	7th		7th	
	8th		8th	
	9th	Test	9th	
4"	10th	**2. Data and Signals:-** Analog and Digital data	10th	
	11th	Analog and digital signals	11th	
	12th	Periodic and Non Periodic signals	12th	
5"	13th	periodic analog signals	13th	
	14th	Digital Signals- Bit rate, Bit length	14th	
	15th	Digital signal as a composite analog signal	15th	
6"	16th	transmission of digital signals	16th	
	17th	Transmission Impairment- Attenuation	17th	
	18th	Distortion and noise	18th	
7"	19th	Performance- bandwidth	19th	
	20th	throughput, latency, jitter	20th	
	21th	Test	21st	
8"	22th	**3. Digital and Analog Transmission :- Analog transmission-** Digital to Analog Conversion-	22nd	
	23th	ASK, PSK, FSK	23rd	
	24th	Analog to Analog Conversion- AM, PM,FM(No mathematical treatment)	24th	
	25th		25th	
9"	26th	Digital transmission- Digital to digital conversion- coding and schemes	26th	
	27th	Analog to digital conversion- PCM and Delta Modulation (DM)	27th	
10"	28th	Transmission modes- Serial and parallel transmission	28th	
	29th	Test	29th	
11"	30th	**4. Multiplexing – FDM, WDM, TDM**	30th	
	31th		31st	
	32th		32nd	
	33th		33rd	
12"	34th	**5. Transmission media:-** Guided media- Twisted pair cable	34th	
	35th	Co-axial cable, fibre optics cable	35th	
	36th	Unguided Media- radio wave, Microwave, Infra	36th	
13"	37th	Test	37th	
	38th	**6. Error Detection and Correction:-** Types of Errors, redundancy, detection v/s correction	38th	
	39th	Forward error correction v/s retransmission.	39th	

14"	40th	Error detection through Parity bit, block parity to detect double errors and correct single errors.	40th	
	41st		41st	
	42nd	General principles of error detection and correction using cyclic redundancy check	42nd	