Lesson Plan

Name of faculty : **Dr. Surender Kumar**

Discipline : **Computer Engineering**

Semester : **3rd Semester**

Subject : **DATA COMMUNICATION**

Lesson Plan Duration : **15 W**eeks

Work Load (Lecture/ Practical) per week (in hours): Lectures-03, Practicals – **Nil**

Week	Theory	
	Lecture day	Topic (including assignment /test)
1st	1st	Data Communication- Components
	2nd	Data representation
	3rd	Data flow Networks- Distributed processing,
2nd	4th	Network criteria
	5th	Physical structures Network Category- LAN, WAN, MAN
	6th	Physical structures Network Category- LAN, WAN, MAN
3rd	7th	Analog and Digital data
	8th	Analog and digital signals
	9th	Periodic and Non Periodic signals
4th	10th	periodic analog signals Digital Signals
	11th	Bit rate, Bit length
	12th	Digital signal as a composite analog signal, transmission of digital signals
5th	13th	Transmission Impairment- Attenuation, Distortion
	14th	noise Performance- bandwidth, throughput, latency, jitter
	15th	Revision
6th	16th	Analog transmission- Digital to Analog Conversion- - Analog to digital conversion
	17th	ASK, PSK, FSK
	18th	Analog to Analog Conversion- AM, PM,FM (No mathematical treatment)
7th	19th	Digital transmission
	20th	Digital to digital conversion- coding and schemes
	21st	- PCM and Delta Modulation (DM) Transmission modes- Serial and parallel transmission
8th	22nd	Multiplexing – FDM,
	23rd	WDM,
	24th	TDM

Week	Theory	
	Lecture day	Topic (including assignment /test)
9th	25th	Revision
	26th	Revision
	27th	Guided media
10th	28th	Twisted pair cable, Co-axial cable, fibre optics cable
	29th	Unguided Media- radio wave, Microwave, Infrared
	30th	Revision
11th	31st	Revision
	32nd	Types of Errors
	33rd	redundancy, detection v/s correction
12th	34th	Forward error correction v/s retransmission
	35th	Error detection through Parity bit
	36th	Revision
13th	37th	block parity to detect double errors and correct single errors
	38th	block parity to detect double errors and correct single errors
	39th	Revision
14th	40th	General principles of error detection and correction using cyclic redundancy check
	41st	General principles of error detection and correction using cyclic redundancy check
	42nd	Revision
15th	43rd to 45th	Revision