

PNS School of Engg. & Tech,
Marshaghai, Kendrapara

LESSON PLAN
Session (2022-2023)

Discipline: Computer Science & Engineering	Semester: 4 th	Name of the faculty: Jayashree Bishoi
Subject: Data Communication & Computer Network, (Th-2)	No. of Days/week: 05	Start Date: 13/02/2023 End Date: 23/05/2023

Week	Class Day	Theory Topics
1 st	1 st	1. Network & Protocol
	2 nd	Data Communication
	3 rd	Network characteristics
	4 th	Types of network
	5 th	Protocol & Architecture, Standards
2 nd	1 st	OSI model (contd...)
	2 nd	OSI model
	3 rd	TCP/IP
	4 th	Question discussion
	5 th	2. Data Transmission & Media Data transmission Concepts and Terminology (contd..)
3 rd	1 st	Data transmission Concepts and Terminology
	2 nd	Analog transmission
	3 rd	Digital Data transmission
	4 th	Transmission impairments, Channel capacity
	5 th	Transmission media
4 th	1 st	Guided Transmission
	2 nd	Wireless Transmission
	3 rd	Revision
	4 th	3. Data Encoding Introduction to encoding techniques
	5 th	Digital data to digital signals, Line coding
5 th	1 st	Uni-polar , polar, bipolar etc.
	2 nd	Block coding and scrambling
	3 rd	Digital data to analog signals, Amplitude shift keying (ask) Frequency shift keying (fsk)
	4 th	Phase shift keying (psk), Quadrature amplitude modulation(qam)
	5 th	Analog data to digital signals, Sampling, Quantization, Encoding
6 th	1 st	Analog data to analog conversion, Amplitude modulation

	2 nd	Frequency modulation, Phase modulation
	3 rd	Question review
	4 th	4.Data Communication & Data link control Asynchronous and Synchronous Transmission
	5 th	Error detection, Simple parity check
7 th	1 st	Two-dimensional parity check, Check sum
	2 nd	Cyclic redundancy check, Line configuration
	3 rd	Error correction (hamming code)
	4 th	Flow control, Stop and wait, Sliding window
	5 th	Error control, Stop and wait arq
8 th	1 st	Multiplexing
	2 nd	Continuing Multiplexing
	3 rd	FDM synchronous TDM
	4 th	Continuing FDM synchronous TDM
	5 th	Statistical TDM
9 th	1 st	Revision
	2 nd	5. Introduction to Switching & Routing Introduction to switching techniques, Circuit switching
	3 rd	Packet switching, Datagram packet switching
	4 th	Virtual circuit switching
	5 th	X.25 protocol, X.25 structure, Layer of x.25
10 th	1 st	Routing in packet switching network
	2 nd	Introduction to congestion, Effects of congestion
	3 rd	Congestion control
	4 th	Congestion
	5 th	Congestion control in packet switching
11 th	1 st	Open loop & close loop, Traffic management
	2 nd	Class Test
	3 rd	6. LAN Technology Introduction to topology
	4 th	Bus topology, Ring topology, Star topology
	5 th	Tree topology, Mesh topology, Hybrid topology
12 th	1 st	LAN architecture, Medium access control
	2 nd	Network devices, Repeater, Hub, Bridge
	3 rd	Switch, Router, Gateway
	4 th	Ethernet, Types of ethernet networks
	5 th	CSMA 1-persistent csma, 2-persistent csma, Non-persistent csma
13 th	1 st	CSMA/CA
	2 nd	CSMA/CD
	3 rd	Fiber channel
	4 th	Wireless LAN Technology..
	5 th	Review
14 th	1 st	7. TCP/IP TCP/IP Protocol Suite
	2 nd	Basic Protocol functions (contd..)

	3 rd	Basic Protocol functions
	4 th	Principles of Internetworking
	5 th	connectionless internetworking
15 th	1 st	Internet Protocol operations
	2 nd	Internet protocol-ip services
	3 rd	Internet protocol -ip addressing
	4 th	Review
	5 th	Class test , Question discussion

Biswarajin Swain

SIGNATURE OF LECTURER

Biswarajin Swain

SIGNATURE OF H.O.D