

Lesson Plan

Name of the Faculty: Er. Paramjit Kaur

Discipline :CSESemester :6th

Subject :Computer network(PC-CS-304A)

Lesson Plan Duration: 15 weeks (Feb-May 2024)

** Work (04 Lecture) per week (In Hours):Lecture -04

Week	Theory		Practical	
	Lecture Day	Topic	Practical Day	Topic
1st	1st	Data Communication System and its components Introduction to	1st	To study the different network devices
	2nd	Computer Networks- Meaning and characteristics		Create a socket for HTTP for web page upload and download
	3rd	Data Flow, Computer network and its goals,		
	4th	Types of computer networks: LAN, MAN, WAN, Wireless and Wired networks		
2nd	5th	Network topologies, protocols, interfaces and services,	2nd	Study of TCP/UDP performance
	6th	ISO-OSI reference model		
	7th	TCP/IP architecture		
	8th	Physical Layer: Concept of Analog & Digital Signal, Bandwidth		
3rd	9th	Multiplexing : Frequency Division, Time Division, Wavelength Division,	3rd	To study about the classes of network addresses.
	10th	Introduction to Transmission Media : Twisted pair, Coaxial cable, Fiber optics, Wireless transmission		

	11th	Switching: Circuit Switching, Message Switching ,Packet Switching & comparisons		
	12th	narrowband ISDN, broadband ISDN		
4th	13th	Test and Discussion of Unit 1	4th	Java URL class(finding protocol,host name and port number of given URL).
	14th	Data link layer: Error Control, Types of errors, framing(character and bit stuffing),		
	15th	Error detection & correction methods		
	16th	Class test		
5th	17th	Flow control; Protocols: Stop & wait ARQ, Go-Back- N ARQ	5th	Viva Voce 1
	18th	sliding window protocols		
	19st	Selective repeat ARQ		
	20nd	HDLC		
6th	21rd	Medium access sub layer: Point to point protocol	6th	Performance comparison of MAC protocols,Performance comparison of Routing Protocols
	22th	FDDI		
	23th	token bus, token ring		
	24th	Reservation, polling,		
7th	25th	Multiple access protocols: Pure ALOHA, Slotted ALOHA	7th	a)To implement echo server and client in java using TCP sockets b)to implement date server and client in Java using TCP sockets
	26th	CSMA,		
	27th	FDMA, TDMA, CDMA,		
	28th	LLC, Traditional Ethernet, fast Ethernet		
8th	29st	-repeaters, hubs,	8th	a)To get the IP Address of a host name b)To implement echo server and client in Java using UDP sockets c)To implement chat server and client in java using UDP sockets
	30nd	switches, Bridges, Router, Gateway		
	31rd	Test and Discussion of Unit 2		
	32th	Network layer: Addressing : Internet address, subnetting		
9th	33th	Routing techniques, static vs. dynamic routing , routing table	9th	Oral test
	34th	DHCP, IEEE standards 802.x, Routing algorithms: shortest path algorithm, flooding		

	35th	distance vector routing, link state routing		
	36th	Protocols: ARP, RARP, IP, ICMP, IGMP, IPV6		
10th	37th	Unicast and multicast routing protocols	10th	Write a Program to get the date of URL connection.
	38th	Test and Discussion of Unit 3		
	39 st	Transport layer: Process to process delivery; UDP; TCP, RPC,		Write a program to determine IP Address & host name of Local Computer.
	40nd	Congestion control algorithm, Leaky bucket algorithm		
11th	41th	Quality of service: techniques to improve .	11 th	To study Firewall concept in our college
	42th	Application layer: DNS; SMTP, SNMP, FTP		
	43th	Firewalls, Bluetooth, Email, S/MIME		
	44th	Security: Cryptography, user authentication, security protocols in internet		
12th	45	ATM	12th	To study Token bucket algorithm,
	46	broadcast and point-to-point networks		
	47	Transmission Impairments: Attenuation, Distortion, Noise,		
	48	Token bucket algorithm, choke packets		
13th	49	Routing algorithms: shortest path algorithm, flooding	13th	To study IMAP in real life
	50	CSMA/CD		
	51	FTP, HTTP		
	52	IMAP		
14th	53	QoS	14th	To learn the technical use and concept of Network devices
	54	Network devices		
	55	security protocols		
	56	Class test		
15th	57	CSMA/CD	15th	To study concept of HTTP & WWW
	58	Framing(character and bit stuffing),		
	59	HTTP & WWW		
	60	Class test		

