

Lesson Plan

Name of the Faculty : Er.Rawinder Kaur (Theory& Practical)

Discipline : CSE

Semester : 6th

Subject : Computer Networks

Lesson Plan Duration : 13 weeks (from Feb 2021 to June 2021)

Work Load (Lecture/Practical) per week (in hours): Lectures-04, Practicals-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	2nd	Computer Networks- Meaning and characteristics	2nd	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		
	5th	broadcast and point-to-point networks,		
3rd	6th	Network topologies, protocols, interfaces and services,	3rd	Study of TCP/UDP performance
	7th	ISO-OSI reference model		
	8th	TCP/IP architecture		
	9th	Physical Layer: Concept of Analog & Digital Signal, Bandwidth		
	10th	Transmission Impairments: Attenuation, Distortion, Noise,		
4th	11th	Multiplexing : Frequency Division, Time Division, Wavelength Division,	4th	To study about the classes of network addresses.
	12th	Introduction to Transmission Media : Twisted pair, Coaxial cable, Fiber optics, Wireless transmission		

	13th	Switching: Circuit Switching, Message Switching ,Packet Switching & comparisons		
	14th	narrowband ISDN, broadband ISDN		
	15th	ATM		
5th	16th	Test and Discussion of Unit 1	5th	Java URL class(finding protocol,host name and port number of given URL).
	17th	Data link layer: Error Control, Types of errors, framing(character and bit stuffing),		
	18th	Error detection & correction methods		
6th	19th	Flow control; Protocols: Stop & wait ARQ, Go-Back- N ARQ	6th	Viva Voce 1
	20th	sliding window protocols		
	21st	Selective repeat ARQ		
	22nd	HDLC		
7th	23rd	Medium access sub layer: Point to point protocol	7th	Performance comparison of MAC protocols,Performance comparison of Routing Protocols
	24th	FDDI		
	25th	token bus, token ring		
	26th	Reservation, polling,		
8th	27th	Multiple access protocols: Pure ALOHA, Slotted ALOHA	8th	a)To implement echo server and client in java using TCP sockets b)to implement date server and client in Java using TCP sockets
	28th	CSMA, CSMA/CD		
	29th	FDMA, TDMA, CDMA,		
	30th	LLC, Traditional Ethernet, fast Ethernet		
9th	31st	Network devices-repeaters, hubs,	9th	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
	32nd	switches, Bridges, Router, Gateway		
	33rd	Test and Discussion of Unit 2		
	34th	Network layer: Addressing : Internet address, subnetting		
10th	35th	Routing techniques, static vs. dynamic routing , routing table	10th	Viva Voce 2
	36th	DHCP, IEEE standards 802.x, Routing algorithms: shortest path algorithm, flooding		

	37th	distance vector routing, link state routing		
	38th	Protocols: ARP, RARP, IP, ICMP, IGMP, IPV6		
11th	39th	Unicast and multicast routing protocols	11th	Write a Program to get the date of URL connection.
	40th	Test and Discussion of Unit 3		
12th	41 st	Transport layer: Process to process delivery; UDP; TCP, RPC,	12th	Write a program to determine IP Address & hostname of Local Computer.
	42nd	Congestion control algorithm, Leaky bucket algorithm		
	43 rd	Token bucket algorithm, choke packets;		
	44th	Quality of service: techniques to improve QoS.		
13th	45th	Application layer: DNS; SMTP, SNMP, FTP, HTTP & WWW;	13th	Final Viva
	46th	Firewalls, Bluetooth, Email, S/MIME, IMAP		
	47th	Security: Cryptography, user authentication, security protocols in internet,		
	44 th	public key encryption algorithm, digital signatures		

