

Government Polytechnic Umri Kurukshetra

Lesson Plan

Name of the Faculty : Deepak Rohilla
 Department : Computer Engineering
 Semester : 5th
 Subject : Computer Networks
 Lesson Plan Duration : 16 weeks (from Sept.-2022 to Jan.-2023)

Week	Lect. day	Theory Topic (Including assignment / test)	Practical
1st	1 st	Concept of network, Models of network computing, Network Models	Recognize the physical topology of a network.
	2 nd	Peer-to-peer Network, Server Client Network, LAN, MAN and WAN	
	3 rd	Network Services, Topologies	
2nd	4 th	Switching Techniques	Recognize the cabling (coaxial, OFC, UTP, STP) of a network.
	5 th	OSI model: Definition, Layered Architecture	
	6 th	Function of various layers in OSI Reference Model	
3rd	7 th	TCP/IP Model: Definition, Functions of various layers	Recognition and use of various types of connectors RJ-45, RJ-11.
	8 th	Comparison between OSI and TCP/IP model	
	9 th	Concept of physical addressing	
4th	10 th	Concept of logical addressing	Recognition and use of various types of connectors BNC and SCST.
	11 th	IPV4 addressers- Address space, Notations	
	12 th	Classful Addressing, Different IP address classes,	
5th	13 th	Classes & Blocks, Net-id & Host-Id, Masks,	Making of cross cable and straight cable.
	14 th	Classless Addressing, Address blocks, Masks	
	15 th	Special IP Addresses, Sub netting	
6th	16 th	Super netting, Loop back concept	Install a network interface card in a workstation.
	17 th	IPV4 packet Format	
	18 th	IPV6 packet Format	
7th	19 th	Ethernet Specification	Identify the IP address of a workstation and the class of the address.
	20 th	Ethernet Standardization	
	21 st	10 Mbps (Traditional Ethernet) 10 Mbps (Fast Ethernet)	
8th	22 nd	1000 Mbps (Gigabit Ethernet)	Managing user accounts in windows.
	23 rd	Network connectivity Devices	
	24 th	NICs	
9th	25 th	Hubs, bridges	Managing user accounts in LINUX.
	26 th	Repeaters, switches	
	27 th	Modems	
10th	28 th	Gateways	Managing user accounts in LINUX.
	29 th	Routers	
	30 th	Switches	

11th	31 st	Network Security Principles,	Use of Netstat and its options.
	32 nd	Cryptography, using secure protocols	
	33 rd	PING,IPCONFIG,	
12th	34 th	IFCONFIG,NETSTAT	Connectivity troubleshooting using PING IPCONFIG, IFCONFIG
	35 th	TRACEROOT	
13th	36 th	Wireshark, Nmap,	
	37 th	TCPDUMP	
	38 th	ROUTEPRINT	
14th	39 th	DHCP Server	
	40 th	Workgroup Networking	
	41 st	Domain Networking	
15th	42 nd	Introduction to wireless LAN	
	43 rd	IEEE: 802.11-Architecture	
	44 th	802.11- Architecture	
16th	45 th	WiMax ad Li-Fi	
	46 th	Wireless Security	
	47 th	Bluetooth- Architecture	
	48 th	Comparison between bluetooth and Wifi	