

Guru Daksh Government Polytechnic Hisar

Lesson Plan

Department: Computer Engineering

Semester: 5th

Subject: Computer Networks

Lesson Plan Duration: 15 weeks

****Work load (Lecture / Practical) per week (in hours): Lectures-04, practicals -02**

Week	Theory		Practical	
	Lect. day	Topic (Including assignment / test)	Pract. Day	Topic
1st	1st	1.NetworksBasics: Concept of network Models of networkcomputing	1st	Recognize the physical topology of a network
	2nd	Network Models Peer-to –peer Network Server Client Network		
	3rd	Network Services	2nd	Recognize the cabling (coaxial, OFC, UTP, STP) of a network
	4th	Concept of switching Switching Techniques		
2nd	1st	Revision	1st	Recognition and use of various types of connectors RJ-45, RJ-11
	2nd	2.OSI Model: OSI ReferenceModel		
	3rd	OSI Reference Model	2nd	Recognition and use of various types of connectors BNC and SCST
	4th	Function of various layers in OSI Reference Model		
3rd	1st	Function of various layers in OSI Reference Model	1st	Recognition of network devices like Switches, Hub of access points for Wi-Fi
	2nd	Function of various layers in OSI Reference Model		
	3rd	Revision	2nd	Recognition of network devices like Routers of access points forWi-Fi
	4th	3. Introduction to TCP/IP: Concept of physical addressing		
4th	1st	Concept of logical addressing	1st	Making of cross cable
	2nd	IPV4 addressers- Address space, Notations		
	3rd	Classful Addressing, Classless Addressing, Network Address Translation	2nd	Making of straight cable
	4th	Different classes of IP addressing		
5th	1st	special IP address	1st	Install a network interface card in a workstation.
	2nd	Sub netting		
	3rd	super netting	2nd	Configure a network interface card in a workstation.
	4th	Loop back concept		
6th	1st	IPV4 packet Format	1st	Identify the IP address of a workstation and the class of the address
	2nd	IPV6 packet Format		
	3rd	Revision		Configure the IP

	4th	4. Network Architecture: Ethernet Specification	2nd	Address on a workstation
7th	1st	Ethernet Standardization	1st	Revision
	2nd	10 Mbps (Traditional Ethernet)		
	3rd	10 Mbps (Fast Ethernet)	2nd	Managing user accounts in windows
	4th	1000 Mbps (Gigabit Ethernet)		
8th	1st	Introduction to Media Connectivity	1st	Managing user accounts in LINUX
	2nd	Leased lines		
	3rd	ISDN	2nd	Study of sub netting of IP address
	4th	PSTN		
9th	1st	RF	1st	Demonstration of sub netting of IP address
	2nd	DSL		
	3rd	VSAT	2nd	Revision
	4th	Optical and IPLC		
10th	1st	Revision	1st	Use of Netstat
	2nd	5.Connectivitydevices: Network connectivity Devices		
	3rd	NICs	2nd	Use of Netstat and its options.
	4th	Hubs, bridges		
11th	1st	Repeaters, switches	1st	Revision
	2nd	Multiplexers		
	3rd	Modems	2nd	Connectivity troubleshooting using PING
	4th	Routers		
12th	1st	Gateways	1st	Connectivity troubleshooting using IPCONFIG
	2nd	Revision		
	3rd	6. Network Trouble Shooting Techniques: Introduction	2nd	Connectivity troubleshooting using IFCONFIG
	4th	Trouble Shooting process		
13th	1st	Trouble Shooting Tools: PING	1st	Revision
	2nd	IPCONFIG		
	3rd	IFCONFIG	2nd	Installation of Network Operating System(NOS)
	4th	NETSTAT		
14th	1st	TRACEROOT	1st	Installation of Network Operating System(NOS)
	2nd	Wiresharp/ Dsniffer/ Pcop		
	3rd	Revision	2nd	Installation of Network Operating System(NOS)
	4th	7. IEEE: 802.11-Architecture		
15th	1st	802.11- Architecture	1st	Visit to nearby industry for latest networking techniques
	2nd	Bluetooth- Architecture		
	3rd	Bluetooth- Architecture	2nd	Revision
	4th	Revision		