

NAME OF THE FACULTY : POOJA
DISCIPLINE : Computer Engineering
SEMESTER : 5th
SUBJECT : Computer Networks
LESSON PLAN DURATION : 15 weeks (from Oct- 2021 to Feb- 2022)

WORK LOAD (LECTURE/PRACTICAL) PER WEEK (IN HOURS):- LECTURE-04, PRACTIACL-03 PER GROUP

WEEK S.N.	THEORY		PRACTICAL		
	Lecture / Hrs	TOPIC (Including Assignment/Test)	Practical / Hrs	Experiment	
1 st	1	Introduction Networks Basics	Group-1	1	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network.
				2	
				3	
	2	Concept of network	Group-2	1	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network.
3	Models of network computing	2			
	4	Networking models		3	
2 nd	5	Peer-to –peer Network	Group-1	1	Recognition and use of various types of connectors RJ-45, RJ-11,BNC and SCST
				2	
				3	
	6	Client-Server Network	Group-2	1	Recognition and use of various types of connectors RJ-45, RJ-11,BNC and SCST
7	LAN, MAN and WAN	2			
	8	Network Services		3	
3 rd	9	Topologies	Group-1	1	Making of cross cable and straight cable
				2	
				3	
	10	Switching Techniques	Group-2	1	Making of cross cable and straight cable
11	Networking Models	2			
	12	OSI model: Definition, Layered Architecture		3	
4 th	13	Functions of various layers	Group-1	1	Install and configure a network interface card in a workstation.
				2	
				3	
	14	TCP/IP Model: Definition	Group-2	1	Install and configure a network interface card in a workstation.
15	Functions of various layers Comparison between OSI and TCP/IP model	2			
	16	Introduction to TCP/IP Addressing		3	
5 th	17	Concept of physical and logical addressing	Group-1	1	Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation
				2	
				3	
	18	IPV4 addresses – Address space, Notations	Group-2	1	Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation
19	Assignment-1	2			
	20	Sessional Test-1		3	

6 th	21	Classful Addressing- Different IP address classes	Group-1	1	Managing user accounts in windows and LINUX	
	22	Classes & Blocks, Net-id & Host-Id, Masks, Address depletion		2		
			3			
			Group-2	1	Managing user accounts in windows and LINUX	
23	Classless Addressing – Address blocks, Masks	2				
		3				
24	Special IP Addresses Subnetting and Supernetting					
7 th	25	Loop back concept	Group-1	1	Sharing of Hardware resources in the network.	
	26	Network Address Translation		2		
				3		
	27	IPV4 Header, IPV6 Header	Group-2	1	Sharing of Hardware resources in the network.	
2						
28	Comparison between IPV4 and IPV6	3				
8 th	29	Comparison between IPV4 and IPV6	Group-1	1		Use of Netstat and its options.
				2		
				3		
	30	Network Architecture- Ethernet specification and standardization	Group-2	1	Use of Netstat and its options.	
31				10 Mbps (Traditional Ethernet), 10 Mbps(Fast Ethernet)		2
						3
32	1000 Mbps (Gigabit Ethernet)					
9 th	33	Network Connectivity	Group-1	1	Connectivity troubleshooting using PING, IPCONFIG, IFCONFIG	
				2		
				3		
	34	Network connectivity Devices NICs	Group-2	1	Connectivity troubleshooting using PING, IPCONFIG, IFCONFIG	
35				Hubs, Switches, Routers, Repeaters		2
	36	Modem, Gateway Configuration of Routers & Switches				3
10 th	37	Network Administration- Network Security Principles		Group-1		1
			2			
			3			
	38	Cryptography, using secure protocols	Group-2	1	Connectivity troubleshooting using PING, IPCONFIG, IFCONFIG	
39				Assignment-2		2
						40

11 th	41	Trouble Shooting Tools: PING,IPCONFIG	Group-1	1	Installation of Network Operating System(NOS)
	42	IFCONFIG, NETSTAT, TRACEROOT		2	
				3	
	43	Wireshark, Nmap, TCPDUMP	Group-2	1	Installation of Network Operating System(NOS)
44	ROUTEPRINT DHCP Server	2			
12 th	45	Workgroup/Domain Networking	Group-1	1	Installation of Network Operating System(NOS)
				2	
				3	
	46	Introduction to Wireless Networks	Group-2	1	Installation of Network Operating System(NOS)
47	Introduction to wireless LAN IEEE 802.11	2			
48	WiMax ad Li-Fi Wireless Security	3			
13 th	49	Introduction to bluetooth - architecture, application	Group-1	1	Visit to nearby industry for latest networking techniques
				2	
				3	
	50	Comparison between bluetooth and Wifi	Group-2	1	Visit to nearby industry for latest networking techniques
51	Introduction to Cloud Computing	2			
52	Definition of Cloud Computing	3			
14 th	53	Advantages of Cloud Computing	Group-1	1	Create a network of at least 6 computers.
				2	
				3	
	54	Cloud Computing service model- SaaS	Group-2	1	Create a network of at least 6 computers.
55	Cloud Computing service model- PaaS	2			
56	Cloud Computing service model- IaaS	3			
15 th	57	Recap- Cloud Computing	Group-1	1	Practicing and Recap
				2	
				3	
	58	Assignment- 3	Group-2	1	Practicing and Recap
59	Sessional Test- 3	2			
60	Revision	3			