NAME OF THE FACULTY   : POOJA

DISCIPLINE   : Computer Engineering

SEMESTER   : 5 th

SUBJECT   : Computer Networks

LESSON PLAN DURATION   : - 15 weeks (from Sept- 2020 to Dec- 2020)

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
1st	1	**Introduction** Networks Basics	Group-1	1	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network.
				2	
	2	Concept of network		3	
	3	Models of network computing	Group-2	1	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network.
				2	
	4	Networking models		3	
2nd	5	Peer-to –peer Network	Group-1	1	Recognition and use of various types of connectors RJ-45, RJ-11,BNC and SCST
				2	
	6	Client-Server Network		3	
			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	
3rd	9	Topologies	Group-1	1	Making of cross cable and straight cable
				2	
	10	Switching Techniques		3	
	11	Networking Models	Group-2	1	Making of cross cable and straight cable
				2	
	12	OSI model: Definition, Layered Architecture		3	
4th	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	
5th	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	
	18	IPV4 addresses – Address space, Notations		3	
	19	**Assignment-1**	Group-2	1	Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation
				2	
	20	**Sessional Test-1**		3	

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

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