Lesson Plan

Name of faculty : **Prashant**
Discipline : **Computer Engineering**
Semester : **5th**
Subject : **Computer network**
Lesson Plan Duration : **16 Weeks (from 4 Aug 2025 to 26 Nov 2025)**
Work Load (Lecture/ Practical) per week (in hours): Lectures-03 Practical -04

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical Week	Topic
1st	1st	Concept of network Models of network computing Networking models	1st	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network
	2nd	Peer-to –peer Network Client-Server Network LAN, MAN and WAN		
	3rd	Network Services Topologies Switching Techniques		
2nd	4th	OSI model: Definition, Layered Architecture	2nd	Recognition and use of various types of connectors RJ-45, RJ- 11,BNC and SCST
	5th	Functions of various layers		
	6th	TCP/IP Model: Definition, Functions of various layers		
3rd	7th	Comparison between OSI and TCP/IP model	3rd	Making of cross cable and straight cable
	8th	Concept of physical and logical addressing, IPV4 addresses – Address space, Notations		
	9th	Classful Addressing- Different IP address classes, Classes & Blocks, Net-id & Host-Id, Masks, Address depletion		
4th	10th	Classless Addressing – Address blocks, Masks	4th	Install and configure a network interface card in a workstation.
	11th	Special IP Addresses Subnetting and Supernetting		
	12th	Loop back concept Network Address Translation IPV4 Header		

5th	13th	IPV6 Header Comparison between IPV4 and IPV6	5th	Seminar/Viva
	14th	Assignment/ Revision		
	15th	**Sessional test**		
6th	16th	Ethernet specification and standardization: 10 Mbps (Traditional Ethernet),	6th	Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation
	17th	10 Mbps(Fast Ethernet) and 1000 Mbps (Gigabit Ethernet)		
	18th	Network connectivity Devices, NICs Hubs, Switches, Routers, Repeaters, Modem, Gateway		
7th	19th	Configuration of Routers & Switches	7th	Managing user accounts in windows.
	20th	Network Security Principles		
	21st	Cryptography,using secure protocols		
8th	22nd	Cryptography,using secure protocols	8th	Sharing of Hardware resources in the network.
	23rd	Trouble Shooting Tools: PING,IPCONFIG, IFCONFIG,		
	24th	NETSTAT, TRACEROOT		
9th	25th	Wireshark, Nmap	9th	Use of Netstat and its options.
	26th	TCPDUMP, ROUTEPRINT		
	27th	DHCP Server		
10th	28th	Workgroup/Domain Networking	10th	Seminar/Viva
	29th	Assignment/ Revision		
	30th	**Sessional II**		
11th	31st	Introduction ad Li-Fi	11th	Connectivity troubleshooting using PING,
	32nd	Wireless Security		
	33rd	Introduction to bluetooth - architecture, application		
12th	34th	Comparison between blue tooth and Wi -fi	12th	IPCONFIG, IFCONFIG

	35th	Definition of Cloud Computing and advantages of Cloud Computing		
	36th	Cloud Computing service model-		
13th	37th	model- SaaS	13th	Installation of Network Operating System (NOS)
	38th	PaaS, Iaas		
	39th	Deployment model-		
14th	40th	Private Cloud	14th	Demonstration of Cloud Computing in Labs or using Online Videos.
	41st	Hybrid		
	42nd	Community cloud.		
15th	43rd	Assignment/ Revision	15th	Seminar
	44th	Revision		
	45th	Revision		
16th	46th	Test	16th	Viva
	47th	Revision		
	48th	Sessional test III		