

Computer Networks
Lesson Plan
(IT-305-F)

Name of the Faculty Ms. Anshita
Discipline B.Tech(Computer Science and Engineering)
Semester 5th Semester
Subject Computer Networks(PCC-CSE-303G)
Lesson Plan Duration 15Weeks (from July 2020 to December 2020)
Work Load per week (in hours) - Lectures - 03

Week	Theory	
	Lecture Day	Topic
1.	1.	Introduction to Computer Networks,Data communication and components
	2.	Computer network and its historical development, internet
	3.	OSI model and TCP/IP model
2.	4.	TCP/IP model
	5.	Physical layer functions, data representation
	6.	Simplex, half duplex and full duplex transmission
3.	7.	Modulation and multiplexing
	8.	Packet and circuit switching
	9.	Transmission media and topologies
4.	10.	Connectionless and connection oriented services
	11.	Framing, Stop and wait, Go back-N ARQ
	12.	Selective repeat ARQ Sliding window protocol
5.	13.	MAC layer functions Random access , controlled access and channelization protocols
	14.	Network layer functions and services
	15.	Logical addressing IPv4 classful and classless addressing
6.	16.	Subnetting NAT, Ipv4, ICMPv4, ARP, RARP ARP, RARP
	17.	BOOTP, Ipv6, Ipv6 addressing, DHCP
	18.	Network devices, hub, repeaters switch, router, gateway
7.	19.	Introduction to routing, Shortest path algorithm
	20.	Flooding, hierarchical routing, link state and distance vector routing
	21.	Transport layer functions and services, process to process communication
8.	22.	UDP, TCP, TCP connection management
	23.	Application layer functions and services, Domain name space(DNS)
	24.	EMAIL, FTP, HTTP, SNMP
9.	25.	Congestion control, quality of service
	26.	QoS improving techniques
	27.	LAN, ethernet, token bus, token ring
10.	28.	MAN architecture-DQDB
	29.	WAN architectures-Frame relay

	30.	ATM, SONET/SDH
11.	31.	Network Security, Firewalls
	32.	Security goals, Types of attacks
	33.	Introduction to cryptography
12.	34.	Types of ciphers
	35.	Symmetric and asymmetric key ciphers
	36.	Revision of unit 1.
13.	37.	Test of unit 1.
	38.	Revision of unit 2.
	39.	Test of unit 2.
14.	40.	Revision of unit 3.
	41.	Test of unit 3.
	42.	Revision of unit 4.
15.	43.	Test of unit 4.
	44.	Revision of whole syllabus.
	45.	Problem Solving