Discipline: **CSE**	Semester: **4th**	Name of the Teaching Faculty: **Tanmay Nath Mishra**
Subject: **COMPUTER NETWORKS**	No. Of Days/per week class allotted: **03 periods per week(Mon, Tues & Friday -1 Period each)**	Semester: 4th From Date: 22-12-2025To Date:18-04-2026 No. Of Weeks: 15
Week	**Class Day**	**Topics to be covered**
1st	1	Introduction to Computer Networks
	2	Applications and Advantages of Networks
	3	Types of Networks (LAN, MAN, WAN, PAN)
2nd	1	Network Models
	2	OSI Reference Model – Overview
	3	OSI Model Layers 1–3
3rd	1	OSI Model Layers 4–7
	2	TCP/IP Model and Comparison with OSI
	3	Transmission Media – Principles and Issues
4th	1	Coaxial Cable
	2	UTP and STP Cables
	3	Fiber Optic Cable – Single Mode & Multimode
5th	1	Wireless Media – HF, VHF, UHF
	2	Microwave and Ku Band
	3	WiFi Standards 802.11 a/b/g/n/ac
6th	1	Cellular Data – 2G, 3G, 4G, 5G
	2	Network Topologies – Bus and Star
	3	Network Topologies – Ring, Mesh, Tree, Hybrid
7th	1	Data Link Layer – Functions and Design Issues
	2	Framing, Error Control, Flow Control
	3	Ethernet Protocol
8th	1	WLAN Protocol
	2	Bluetooth, Switching Techniques and VLAN
	3	Network Layer – Functions and Design Issues
9th	1	IPv4 Addressing
	2	IPv6 Addressing
	3	Routing Principles
10th	1	Distance Vector Routing Algorithm
	2	Link State Routing Algorithm
	3	RIP Protocol
11th	1	OSPF Protocol
	2	Transport Layer – Functions and Design Issues
	3	UDP Protocol
12th	1	TCP Protocol

	2	TCP vs UDP
	3	Application Layer – Overview and Design Issues
13th	1	DNS
	2	DHCP
	3	SNMP
14th	1	FTP and TFTP
	2	SMTP
	3	World Wide Web (WWW)
15th	1	Telnet and SSH
	2	Network Interface Card (NIC) and Hub
	3	Switch Types, Router, Access Point, WLC